Call4Innovators – Regulations

Article 1
General aspects

Following the production launch of the new supercomputing facility HPC6, Eni is organizing the so called Call4Innovators aimed at promoting the utilization by third parties of a partition of Eni's high performance computing facilities to propose innovative computing workflows and methodologies in various fields related to Energy Transition.
This initiative, that is unique in its genre, is organized by Eni S.p.A. with registered office in Rome at Piazzale Enrico Mattei no. 1 - 00144, Tax ID no. n. 00905811006, Rome Company Register no. 00484960588, in strict collaboration with esteemed technological partners Advanced Micro Devices inc. (AMD), Hewlett Packard Italiana S.r.l. (HPE) and Cineca Consorzio Interuniversitario (CINECA).

Article 2
The Scope

With the aim of speeding-up the transition to lower-carbon and zero-carbon energy sources, of promoting scientific and technological discovery facilitated by high performance computing and artificial intelligence, and of encouraging the widespread adoption of innovative computing workflows for the energy transition, Eni will provide, at the conditions set out below and in the related documentation, access to its own high performance computing to scaleups, startups, small-medium enterprises, academic institutions, research centers and aspiring entrepreneurs (from now on indicated as 'Candidates') working on advanced computing solutions for the Energy Transition (the "Projects"), granting them the computing hours/nodes needed to test and scale-up their own computing workflows and algorithms in the following application categories:

A) Computational Material Science.
B) Meteorology & Earth Science.
C) Energy portfolio management.
D) Engineering Systems: Modelling and Optimization.
E) Smart mobility.

When applying to the call, the Participants will be asked to select one of the categories and to identify the relevant topics for the preferred category.

Annexes 1-5 of these Regulations provide detailed descriptions of the relevant topics for each category.

The Candidates will have to show the capability to bring on Eni's HPC6 their advanced computing workflows in the A)-E) application categories with the support of Eni, AMD, HPE and CINECA mentors.

For each of the successfully ported workflows on HPC6, the Candidates agree that Eni will reserve itself the possibility to negotiate licenses of utilization of said workflows or other forms of engagement through separate and ad-hoc agreements.

Article 3
The award and evaluation procedure

The Call4Innovators will award selected Candidates an agreed amount of computing hours for their workflows to smoothly run on HPC6 computing facilities in a pilot project whose scope of work falls within the subject of the application. The total number of hours available as the award for this initiative is fixed.

The selected Candidates will be identified based on the ranking list defined by the Final Evaluation Committee, up to the total number of hours available in the award. The number of hours required by each Candidate to carry out the Project will be considered in case of equal scores among different Projects. Consequently, even if the Final Evaluation Committee identifies a given number of Candidates as potential finalists for the selection, they will be selected only in case of actual computing hours residual capacity.

On the Candidates included in the final ranking, preliminary compliance checks are carried out in accordance with Eni's Code of Ethics principles before any award will be granted to them. In case the compliance checks have a negative outcome, the candidates and their proposed Projects will be excluded from taking part in this initiative.

The duration, awarded hours, mode of utilization, and development of the pilot projects will be defined through separate and ad-hoc agreements between each selected Candidate and Eni, according to the types of workflows that will be awarded.

The following Committees are involved in evaluating the Candidates' applications and in granting the computing hours/nodes to the Candidates for the Call4Innovators and in assessing the correct utilization of the computing hours/nodes:

- the Organizing Committee, which oversees the Call 4 Innovators general management;
- two evaluation committees (Technical and Final Committee), which are in charge of collecting

and assessing the applications submitted by the Candidates for the Call4Innovators and of following up on the pilot projects awarded to the Candidates that will be selected in the categories mentioned in Article 2.

The following elements will be considered in the assessment of the Candidatures:

- the **scientific relevance**, soundness, and credibility of the proposed solution;
- the **clarity**, **consistency**, and **completeness** of the application proposal;
- the **originality and novelty** of the proposal, and it's possible contribution to the advancement of the state-of-the-art in the relevant sector;
- the **expected impacts of the Project** on technological, economic, and/or societal fields;
- the **feasibility** of the proposal, appropriateness of **resource allocation**, and team skills to fulfill the objectives of the proposed work plan;
- the clear demonstration of the **need for large allocations**, both in terms of computing time and data storage;
- the use of **GPU-enabled computing methods**, when applicable, preferred over CPU-based only computations;
- the proposal contribution to identify solutions targeting **Sustainable Development Goals** (SDGs).

The award will be granted to the selected Candidates after the selection period of the best candidatures, that will be held within September 30th, 2025.

Article 4
The Organizing Committee

The awards are managed by the Organizing Committee, whose headquarters are located at the Eni offices in Via Emilia, 1, 20097 San Donato Milanese (MI), Italy.

Its members are appointed by the Head of Open Innovation & Technology & Intellectual Property Valorization and the Head of Digital & Information Technology, who are respectively the President of the Organizing Committee and the Vice President for the ordinary operations of the Organizing Committee.

The Organizing Committee appoints a Project Manager for the Call4Innovators initiative that oversees and coordinates internal and external stakeholders, taking part at the meetings of the Organizing Committee and supervising and managing the activities of the Evaluation Committees.

The Organizing Committee is also responsible for the following activities:

- defining the guidelines for the Evaluation Committees;
- approving the Regulations and any of their changes;
- appointing the Members of the Technical and Final Evaluation Committees;
- providing an official announcement of the Call4Innovators;
- announcing, among the suitable Candidates, the selected awardees of the various computing hours/nodes, as chosen by the Evaluation Committees.

Article 5
The Technical Evaluation Committee

The Technical Evaluation Committee is composed by Members, appointed by the Vice President of the Organizing Committee as per Article 4 of these Regulations, and selected based on their proven competence in the subjects covered by the Call4Innovators. The Technical Evaluation Committee is composed of both Eni's representatives as well as AMD, HPE and CINECA representatives.

The work of the Technical Evaluation Committee is coordinated by the Project Manager of this initiative, who also guarantees the necessary liaison with the activities of the Organizing Committee.

The Technical Evaluation Committee receives the applications submitted by the Candidates for each category of the award and evaluates their compliance with the requirements of the Call4Innovators Regulations as well as the technical feasibility of the proposed solutions.

The Technical Evaluation Committee is in charge of evaluating each Project application submitted by the Candidates for the five categories according to the requirements of the present Regulations, and the Project Manager writes a report for the Organizing Committee on each category, stating that all the Candidatures submitted have been duly examined and listing the Candidates to be shortlisted for the subsequent assessment by the Final Evaluation Committee as per Article 6.

After the identification of the preferred solution(s) by the Final Evaluation Committee as per Article 6, the members of the Technical Evaluation Committee are responsible for following-up the awarded pilot projects, guaranteeing that the pilot projects make responsible and full utilization of the awarded computing hours/nodes and that they are in compliance with the Projects presented by the Candidates.

Article 6
The Final Evaluation Committee

The Final Evaluation Committee is composed by Members, appointed by the Vice President of the Organizing Committee as per Article 4 of these Regulations, and selected based on their proven competence in the subjects covered by the Call4Innovators. The Final Evaluation Committee is composed of Eni's and its Affiliates representatives only.

The work of the Final Evaluation Committeeis coordinated by the Project Manager of this initiative who also guarantees the necessary liaison with the activities of the Organizing Committee.

The Final Evaluation Committee receives the applications shortlisted by the Technical Evaluation Committee for each category of the award. The Final Evaluation Committee is responsible for assessing all applications on the shortlist and ranking them based on evaluation scores and the Project Manager writes a report for the Organizing Committee on each category, stating that all the shortlisted Candidatures submitted have been duly examined and listing the Candidates to be awarded the agreed computing hours/nodes.

After the successful identification of the suitable Candidates, the members of the Final Evaluation Committee will be involved in the supervision of the awarded pilot projects.

Article 7
Validity of the Committee resolutions

The majority of the Members of the Organizing Committee, of the Technical Evaluation Committee, and of the Final Evaluation Committee shall be present for their meetings to be considered valid. Should any Member of any of these Committees be unable to attend the meetings either in person or via teleconference, they may delegate other Members of the Committee to represent them. It is not possible for any Member of a Committee to represent more than one absent Member.

The deliberations of the Final Evaluation Committee for the selection of the Call 4 Innovators eligible Projects are made using voting rules established by the Commission itself and based on the *Robert's Rules of Order*.

Article 8
Terms of Application

The deadline for applying to the Call4Innovators falls on August 7st, 2025.

The candidature forms are available on the website https://enicall4innovators.com:

- The **Application Form** and **CV Form** are compulsory and must be thoroughly filled in before the deadline;
- **A list of relevant publications** regarding the results of the Project, if any, can be included in the CV Form, and the digital copy (.pdf files) of such publications are considered nice to have. Such digital documents shall be uploaded in the dedicated section available while filling the forms.

All Applications must be submitted in English and must correctly and fully identify the Candidates to be validly accepted.

All applications to the Call4Innovators shall compulsorily enclose an accurate description of the workflow and the reasons why said workflow necessitates the requested computing nodes/hours, possibly accompanied by scientific publications or technical reports supporting the request.

Moreover, the applications should contain the answer to the "technical request" questions provided by the Technical Evaluation Committee and included in the Application Form, aiming at assessing the compliance with the present Regulations, as well as understanding the suitability and value of the proposed solution.

In applying to Call4Innovators, applicants must demonstrate compatibility of the proposed Project with the HPC6 systems and the requested computing resources according to the ANNEX TECH ("technical guidelines").

Eni reserves the right to exclude candidatures not compliant with the present Regulations or for which applicants are not able to demonstrate compatibility with HPC6 systems.

If the application is selected, only individuals whose CVs have been submitted during the application procedure will be granted access to the supercomputing resources.

To apply, the Candidates shall comply with all requirements and provisions set out in these Regulations, which they will confirm having read and they will accept upon submission of the application.

The Candidates shall also declare that they have read and are aware of the "Eni Code of Ethics" and of the "Anti-Corruption Management System Guideline" adopted by Eni, available on Eni official website (www.eni.com, Governance section), and that they share the principles contained therein and undertake to ensure full compliance with them.

Article 9
Closure Ceremony

An Official Closure Ceremony to show-case the results of the selected pilot projects will be held in Italy and after the successful completion of the pilot projects tentatively during the first quarter of the year 2026. The date and location of the Ceremony shall be decided discretionally by the Organizing Committee. The details will be communicated in due time to the Candidates of the selected Projects.

Board and lodging expenses will be covered for one representative of the selected Candidates for each selected Project up to 2 overnight stays to participate to the final ceremony.

Article 10
Regulations' changes or amendments

The Organizing Committee may make any changes or additions to the present Regulations.

Article 11
Publication of Results

The name of the selected Candidates will be made public by the Organizing Committee on www.eni.com and on other communication channels as deemed fit.

The Organizing Committee may, in cooperation with the awarded Candidates, undertake initiatives to promote the publication, divulgation, and communication of the awarded pilot projects during scientific and technological conferences.

Article 12
Contact details

Organizing Committee:

Alfonso Amendola
Eni S.p.A.
Strada Statale 9 Via Emilia, 1,
20097 San Donato Milanese (MI)
e-mail: call4innovators_orgcommittee@eni.com

Secretariat:

The Secretariat activities are managed by Plug & Play Italy S.r.l. with the following focal points:

Arianna Deli - Partner Success Manager
a.deli@pnptc.com ; +39 347 161 87 74

Antonio Grifoni - Senior Ventures Associate
a.grifoni@pnptc.com ; +39 327 205 69 99

Article 13
Intellectual Property

Candidates retain their respective intellectual and industrial property rights in their Project application. The Candidates warrant and represent, under their exclusive responsibility, that the Projects are original and do not infringe the intellectual and industrial property rights of third parties

Eni reserve the possibility of engaging the selected Candidates, after or during testing of the pilot projects, for further activities through separate and ad-hoc agreements.

Article 14
Personal Data Protection

Eni will process personal data supplied in the context of the application to the Call4Innovators, and, in case of award, in the context of the use of the award itself, as an independent data controller, in full compliance with Regulation (EU) 2016/679 ("GDPR").

In application of Article 12(1) GDPR, Eni provides an adequate privacy notice in ANNEX PRIVACY ("Privacy Information Notice"). The Candidates, and in case of selection the selected Candidates, by submitting their Application to the Call4Innovators declare that they have read the privacy notice.

If the Candidates, and in case of selection the selected Candidates, provide Eni with personal data of other third parties (such as, team members or other third parties who are not taking part to the Call4Innovators), they guarantee such third party has read Eni's privacy notice and they guarantee that they are providing such third party's data in compliance with applicable data protection regulations.

Article 15
Compliance requirements

At the time of submitting the Application for the call, the Candidate must have read and acknowledged the Terms & Conditions of the Call and the following compliance documentation, available on www.eni.com:

- Eni Code of Ethics;

- the general standards of transparency of the Model 231 pursuant to Legislative Decree no. 231/2001 and of the Compliance Models;

- the "Anti-Corruption Management System Guideline" (and its subsequent updates), the ECG Policy "Respect for Human Rights in Eni" and the Policy "Zero Tolerance against violence and harassment in the workplace" adopted by Eni.

Moreover, the Candidate undertakes to comply with:

- Anti-Corruption Laws (meaning (i) the anti-corruption laws applicable to both the Candidates and Eni around the world; (ii) the principles of international anti-corruption treaties such as the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and the United Nations Convention Against Corruption);

- Anti-Money Laundering Laws (meaning the anti-money laundering laws of the Country in which the activities to which the tender is carried out and in which the Candidate resides);

- Human Rights (meaning (i) the principles contained in applicable national and international regulations and instruments, guidelines and best practices aimed at preventing human rights violations, including the United Nations Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and the ILO Declaration on Fundamental Principles and Rights at Work; (ii) the applicable legal provisions on terms and conditions of employment, and (iii) national and international legislation against trafficking and smuggling in human beings and on immigration, right of lawful stay by third-country nationals and forced labour).

The Candidate, submitting the application, also declares that has no conflict of interest with respect to the participation in the call for proposal and agrees to promptly inform Eni if such situation should arise during the selection process.

Annex 1

Computational Material Science

In the context of Computational Material Science category, computing applications will be evaluated in relation to the following specific topics:

List of topics for Computational Material Science

MS-1 *Green Chemistry: new catalysts for sustainable chemical reactions*	Advanced molecular simulations to develop new eco-friendly catalysts for sustainable chemical reactions.
MS-2 *Green Chemistry: reaction mechanisms for green compounds from biomass*	Advanced molecular simulations for chemical reaction modeling to design and optimize bio-derived green compound production.
MS-3 *Green Chemistry: green solvents for sustainable chemical reactions*	Advanced molecular simulations to develop new eco-friendly solvents for sustainable chemical reactions in industrial processes.
MS-4 *Biofeedstocks: synthesis optimization*	Advanced molecular simulations to optimize biofeedstocks synthesis processes for biofuel production.
MS-5 *Biofeedstocks: blend optimization*	Advanced molecular simulations to develop optimal biofeedstocks by innovative recipes and blends to optimize biofuel production. Includes the simulation of new molecular structures with specific physicochemical properties to improve the performance and sustainability of production processes.
MS-6 *Biofeedstocks: characterization for biofuels production*	Advanced molecular simulations for biofeedstocks in biofuel production to study biofeedstocks reactivity and structure (e.g. cellulose polymers, lipids) to identify functional groups involved in the transesterification and hydrogenation reactions to produce biofuel.
MS-7 *Biofeedstocks: thermal and chemical stability*	Advanced molecular simulations to predict thermal and chemical stability of bio feedstocks and optimize their industrial application.

MS-8 *Biocatalysis: engineering enzymes*	Advanced molecular simulations (e.g., quantum mechanical simulations) to develop new enzymes for biocatalysis analyzing their structure and behavior.
MS-9 *Biocatalysis: enzymatic reaction optimization*	Chemical reaction modeling to optimize enzymatic reactions for sustainable biofuel production.
MS-10 *Biocatalysis: extreme conditions catalysts*	Advanced molecular simulations (e.g., quantum mechanical simulations) to develop new enzymes for extreme biocatalysis (e.g. thermo-resistant, alkali-resistant, and solvent-resistant).
MS-11 *Catalysis: heterogeneous, homogeneous, photocatalysis*	Chemical reaction modeling for heterogeneous, homogeneous, and photo-catalysis.
MS-12 *Advanced Materials: fiber composites*	Advanced molecular simulations to model fiber-reinforce materials.
MS-13 *Advanced Materials: self-healing, self-assembling, piezo-responsive, photo-responsive*	Advanced molecular simulations to model new advanced materials with self-healing, self-assembling, piezo-responsive, photo-responsive behavior.
MS-14 *Advanced Materials: polymeric, inorganic for gas separation, high-T & electrolytic cells membranes*	Advanced molecular simulations to model new polymeric and/or inorganic membranes for gas separation, high-T & electrolytic cells.
MS-15 *Innovative Methods: study of reaction and process physics*	New methodologies for in-silico screening for materials through the lens of DFT, molecular dynamics, coarse-grained modeling and similar technologies, including neural network potentials and more generally data-driven methods.
MS-16 *Innovative Methods: Advanced Computational Continuum Mechanics for multiphase flow and computational rheology*	New methodologies for advanced continuum mechanics for multiphase flow (Eulerian, Lagrangian, discrete) and computational rheology (e.g. viscoelastic material flow).

MS-17 *Fusion science: breeding fluids MHD modelling*	Chemical reaction modeling breeding fluids in nuclear fusion.
MS-18 *Fusion science: erosion*	Advanced modeling of material erosion and deposition in fusion reactors.
MS-19 *Advanced materials for carbon capture*	Innovative workflows for generating and validating new materials 'used for' carbon capture 'applications', through the interplay of first principles simulations, neural network potentials and molecular dynamics simulations.

Other applications of **Computational Material Science** outside these specific topics may be eventually taken into consideration for awarding the computing hours/nodes.

Candidatures to the **Computational Material Science** category shall compulsorily enclose an accurate description of the workflow and the reasons why said workflow necessitates the requested computing nodes/hours, possibly accompanied by scientific publications or technical reports validating the request.

Annex 2

Meteorology & Earth Science

In the context of **Meteorology & Earth Science** category, computing applications will be evaluated in relation to the following specific topics:

List of topics for Meteorology & Earth Science

ME-1 *Nowcasting and Short-term Forecasting*	Advanced modeling for short-term forecasting and nowcasting of several weather variables (e.g. temperature, wind, radiation, precipitation).
ME-2 *Long-term climate scenarios*	Advanced modeling of long-term climate scenarios to analyze and forecast weather patterns and climate changes over extended periods to optimize energy production strategies and support informed decisions about infrastructure investments.
ME-3 *Weather impacts on power plant production*	Localized weather forecast with fine resolution and advanced simulation of weather impacts on power plants (e.g. solar, wind, hydroelectric, ...) to predict energy production and unavailability.
ME-4 *Weather impacts on zonal renewable power production*	Advanced modelling of weather impacts on renewable power production (e.g. solar, wind, hydroelectric, ...) in specific geographical areas / market zones.
ME-5 *Groundwater and Contaminants modelling - Chemical fate and transport analysis in multi-media and sea environmental systems*	Advanced modeling for chemical fate and transport analysis in multi-media and sea environmental systems.
ME-6 *Groundwater and Contaminants modelling - Environmental site data and remediation analysis*	Advanced modeling for environmental remediation simulations and data analysis to enhance remediations efficiency in terms of time, cost, and sustainability. This might include methodologies for defining the quality of analytical results in remediation and monitoring projects to ensure effective and sustainable remediation practices.

Other applications of **Meteorology & Earth Science** outside these specific topics may be eventually taken into consideration for awarding the computing hours/nodes.

Candidatures to the **Meteorology & Earth Science** category shall compulsorily enclose an accurate description of the workflow and the reasons why said workflow necessitates the requested computing nodes/hours, possibly accompanied by scientific publications or technical reports validating the request.

Annex 3

Energy portfolio management

In the context of **Energy portfolio management** category, computing applications will be evaluated in relation to the following specific topics:

List of topics for Energy portfolio management

EP-1 *Energy commodity market: scenario predictive analysis*	Advanced predictive models for long term energy market scenario evaluation (e.g., supply-demand dynamics, pricing trends, regulatory impacts, geopolitical events) to forecast market trends and optimize long term business strategies.
EP-2 *Energy commodity market: capacity expansions models for European power markets*	Long-term modelling of the European power wholesale market, implementing a dispatching model able to simulate different scenarios in terms of power mix evolution, development of energy storage systems, regulatory frameworks and coupling of different markets.
EP-3 *Energy commodity market: price forecast*	Forecast of the future prices of key energy commodities such as power, oil, natural gas and bio feedstocks by examining potential influencing factors.
EP-4 *Energy commodity market: demand forecast*	Demand forecast for key energy commodities such as power, natural gas and bio feedstocks.
EP-5 *Energy commodity portfolio: exotic options pricing*	Advanced pricing models and risk evaluation for complex financial instruments like exotic options in energy commodities market considering different scenarios and time horizons.
EP-6 *Energy commodity portfolio: metrics for risk evaluation*	Advanced models for risk evaluation in energy commodity portfolios.
EP-7 *Energy commodity portfolio: hedging strategies*	Advanced models to define optimal hedging strategies for energy commodities portfolios (e.g. stochastic modeling, machine learning, quantitative analysis, ...) to minimize exposure to price fluctuations and market uncertainties and mitigate risks.

Other applications of **Energy portfolio management** outside these specific topics may be eventually taken into consideration for awarding the computing hours/nodes.

Candidatures to the **Energy portfolio management** category shall compulsorily enclose an accurate description of the workflow and the reasons why said workflow necessitates the requested computing nodes/hours, possibly accompanied by scientific publications or technical reports validating the request.

Annex 4

Engineering Systems: Modelling and Optimization

In the context of **Engineering Systems: Modelling and Optimization category**, computing applications will be evaluated in relation to the following specific topics:

List of topics for Engineering Systems: Modelling and Optimization

ES-1 *Biorefineries: energy and emissions efficiency*	Advanced models for real-time biorefineries GHG saving and energy index prediction integrating material/energy balances to reduce emissions, optimize energy consumption and improve operational efficiency in order to reduce GHG impact on products.
ES-2 *Optimization of vessel operations*	Advanced models for vessel scheduling and routing optimization (e.g., demurrage days reduction, alternative routes and docks, scenario analysis), leveraging predictive and real-time analytics to evaluate economic and environmental impacts.
ES-3 *Power generation and co-generation*	Advanced simulation models for processes and equipment in power generation plants, co-generative plants and multi-energy production systems (e.g., combined power and heat generation, energy storage, steam, water production and industrial cooling systems).
ES-4 *5th Generation District Heating & Cooling Systems*	Advanced simulation models for 5th generation district heating and cooling systems to optimize low-enthalpy thermal energy harvesting, storage, and reuse, leveraging low-grade heat sources and advanced storage solutions to enhance energy efficiency and sustainability, reducing emissions and costs.
ES-5 *Refineries and biofeedstocks co-processing*	Advanced modeling of production processes, chemical reactions, and equipment to process biofeedstocks in traditional refineries and produce biofuels (e.g. co-processing in traditional refining units, biomass pre-treating units, ecofining units).
ES-6 *Industrial plants and refineries networks*	Advanced modeling of networks (e.g. fuel/water/hydrogen/compressed air/steam) in industrial plants and refineries for operational efficiency (production plan optimization, waste reduction, production modulation).

ES-7 *Chemical Plants*	Advanced modeling to simulate chemical plants processes and equipment for production optimization.
ES-8 *Refineries Energy and emissions efficiency*	Advanced models for real-time refineries energy index prediction integrating material/energy balances to reduce emissions, optimize energy consumption, operational efficiency and sustainability.
ES-9 *Advanced Chemical Reactors*	Advanced simulation and optimization id advanced chemical reactors (e.g., magnetic induction catalytic, non-thermal and warm plasma chemical reactors).
ES-10 *Solid oxide electrolyzers and fuel cells*	Advanced modelling and optimization of solid oxide electrolyzers and fuel cells.
ES-11 *Solar Farms*	Advanced modeling of solar farms, with focus on decadal forecasts in multi-variate climate change environments, long term production processes and equipment performances.
ES-12 *Wind Farms*	Advanced simulation and modeling of renewable energy production processes or equipments for wind farms.
ES-13 *Energy storage*	Advanced simulation and optimization methods for energy storage systems to optimize the design, operation, and integration of these systems focusing on energy efficiency, cost-effectiveness, and environmental sustainability.
ES-14 *Fusion devices: neutronics*	Advanced simulations to predict neutronics behaviors and optimize reactor performance.
ES-15 *Fusion devices: plasma equilibrium and MHD modelling*	Advanced modelling of plasma or breeding fluids within fusion reactors using Magnetohydrodynamics (MHD) to provide a fluid description and understand its macroscopic equilibrium and stability. This includes designing magnetic systems to maintain plasma in a steady-state force balance and ensuring stability to prevent disruptions.
ES-16 *Fusion devices: plasma disruption modelling*	Advanced simulation to predict and mitigate plasma disruption in fusion reactors (e.g., real-time forecast and control) to ensure the stability and efficiency of the fusion process.

ES-17 *Fusion science: erosion*	Advanced simulation to predict and mitigate erosion in fusion reactors to ensure the stability and efficiency of the fusion process.
ES-18 *Fusion devices: cryogenics and thermal modelling*	Advanced simulation of cryogenic systems to cool and maintain low temperatures for various components of fusion reactors (e.g., superconducting magnets, thermal shields, and cryogenic pumps) to ensure the efficient operation of the reactor by optimizing energy consumption and maintaining the necessary conditions for plasma confinement.
ES-19 *Fusion devices: divertor edge simulation and plasma-wall interactions*	Advanced modelling of plasma behavior at the edge of the divertor and its interactions with the reactor walls (e.g. detachment, stability, and the transport of impurities) to predict and optimize these interactions and ensure the longevity and efficiency of fusion reactors.
ES-20 *Carbon capture systems*	Advanced modelling for simulating different processes in existing carbon dioxide capture systems and design new systems for the goal.

Other applications of **Engineering Systems: Modelling and Optimization** outside these specific topics may be eventually taken into consideration for awarding the computing hours/nodes.

Candidatures to the **Engineering Systems: Modelling and Optimization** category shall compulsorily enclose an accurate description of the workflow and the reasons why said workflow necessitates the requested computing nodes/hours, possibly accompanied by scientific publications or technical reports validating the request.

Annex 5

Smart Mobility

In the context of **Smart Mobility** category, computing applications will be evaluated in relation to the following specific topics:

List of topics for Smart Mobility

MB-1 *Green routing optimization for car sharing*	Advanced modeling of car sharing dynamics (traffic, demographics, vehicle usage, battery consumption, user profile) to identify optimal vehicle and routes matching user need and reducing energy consumption (green routing) and to optimize charging station positioning.
MB-2 *Demand Forecasting and Optimization: fleets*	Advanced modeling to predict the future demand of car sharing service and optimize fleet management (e.g. considering weather forecast, bank holidays, social event, rush hours and historical data).
MB-3 *Demand Forecasting and Optimization: car sharing points*	Advanced analysis of car sharing service demand to optimize car sharing fixed based points positioning and identify strategical areas for new installations.
MB-4 *Dynamic Pricing*	Advanced modeling techniques leveraging data analytics and economic theories with the goal of adjusting pricing in real-time based on market scenario variations, such as demand fluctuations, competitor pricing, fuel costs, and other external factors.

Other applications of **Smart Mobility** outside these specific topics may be eventually taken into consideration for awarding the computing hours/nodes.

Candidatures to the **Smart Mobility** category shall compulsorily enclose an accurate description of the workflow and the reasons why said workflow necessitates the requested computing nodes/hours, possibly accompanied by scientific publications or technical reports validating the request.

Annex privacy

Privacy Information Notice

As required by Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data ("**GDPR**"), Eni S.p.A. ("**Company**" or "Data **Controller**") sets out below the privacy notice relating to the processing of your (as the Data Controller's counterparty - the "**Counterparty**") personal data ("**Personal Data**") in relation to (i) the participation in the "Call4Innovators" ("**Initiative**") and (ii) the procedure carried out after the potential allocation of the award provided by the Initiative.
This privacy notice is for the Counterparty (if a natural person) and for the individuals associated with the Counterparty (e.g. directors, trainees, employees, collaborators, partners and, more generally, those involved in various ways - "**Data Subjects**"). The Counterparty undertakes to give this privacy notice to those individuals whose Personal Data will be processed.
With regard to the processing of Personal Data in connection with ethical and reputational checks where applicable (e.g. anti-corruption due diligence), please see the privacy information notice available at eni.com.
With regard to the processing of Personal Data that takes place in the event that the Counterparty is involved as a reported person or as a third party in the context of a reporting illegal conduct (so-called "**Whistleblowing Report**"), please refer to the privacy policy available at this address, which you should read.

1. Data Controller

The Data Controller is Eni S.p.A., VAT no. 00905811006, with registered office at Piazzale Enrico Mattei, 1, 00144 Rome - Italy.

2. Data protection officer

For any information about the processing of Personal Data, you can reach out to the Data Protection Officer ("**DPO**") appointed by the Company at the following email address: dpo@eni.com.

3. Personal Data processed

The Personal Data processed are those provided by the Counterparty when submitting its application to the Initiative. Examples of such Personal Data are: personal and contact data, nationality, organization to which the Data Subject belongs or works for, job title, information contained in the curriculum vitae. Such information is to be considered as Personal Data where it pertains to identified or identifiable natural persons, or, if the Counterparty is a natural person, to the Counterparty themself. In case of multiple team members, Personal Data of all team members may be provided by the team leader when submitting the

application to the Initiative.
In case the Counterparty is awarded with a prize and thus is granted access to the HPC6 IT system, including hardware, software, networks, data and all associated resources made available by the Company as owner of them (the "**Prize**"), the Data Controller will also process Personal Data required for the utility management (such as User-ID, IP Address, password, personal data, ID documents and fiscal code) and for the internet browsing filtering and protection management (such as User-ID, IP Address, as well as other Data associated to the Data Subject, which, depending on the cases, may include e.g. FQDN of the website - e.g., www.example.com - and category of the website - e.g., Malware). In case of multiple team members, Personal Data of all team members required for the utility management may be provided by the team leader.

4. Purposes of the processing

Personal Data are processed:

a. to comply with legal obligations and public authorities requests;
b. for purposes related and/or connected to the submission and evaluation of the application to the Initiative;
c. in case of victory, to enable the Data Subject to be granted the Prize;
d. in the context of exceptional transactions involving a merger, sale or business unit transfer, to enable due diligence processes;
e. for internal inspections purposes to ascertain, exercise or defend a right of the Data Controller or of a third party before the courts;
f. to conduct, on an aggregate basis, statistical analysis of participation in the Initiative.

5. Legal basis

Processing of Personal Data for the purposes indicated in paragraph 4, let. a) above is, in accordance with article 6, para. 1), let. c) GDPR, required by the provisions of the law governing the contractual relationship or may be required by public authorities.
Processing of Personal Data for the purposes indicated in paragraph 4, let. b) above is, in accordance with article 6, para. 1), let. b) GDPR, necessary fulfil the request of the Counterparty to participate to the Initiative.
Processing of Personal Data for the purposes indicated in paragraph 4, let. c) above is, in accordance with article 6, para. 1), let. b) GDPR, necessary to enable the Counterparty, in the context of the Initiative, to be granted the Prize as per the regulation of the Initiative.
Processing of Personal Data for the purposes indicated in paragraph 4, lett. d) and e) above is, in accordance with article 6, para. 1), let. f) GDPR, based on a legitimate interest of the Company in pursuing its commercial activities and safeguarding its rights.
Processing of Personal Data for the purposes indicated in paragraph 4, let. f) above is, in accordance with

article 6, para. 1), let. f) GDPR, based on a legitimate interest of the Company to continuously improve the efficiency and security of its services.
Any refusal to provide Personal Data for the purposes listed in paragraph 4 will make it impossible for the Company to consider the submitted application to the Initiative and, in case of victory, to award the Prize.

6. Means of the processing

Personal Data may be processed with the aid of electronic or automated systems, managed through tools that ensure security and confidentiality, and will include every operation or set of operations necessary for the processing.

7. Persons authorised to process and recipients of Personal Data

Personal Data are processed by personnel appointed by the Data Controller to pursue the purposes described in paragraph 4, as persons authorised to process.
The Personal Data may be disclosed by the Data Controller not only to public authorities, where requested by them or where required by law, but also to the following categories of recipients, solely for the purposes indicated in paragraph 4 above:

- other companies controlled by Eni S.p.A.;
- technical advisors of the Initiative (Advanced Micro Devices Inc.; Hewlett Packard Italiana S.r.l.; CINECA- Consorzio Interuniversitario);
- professional and advisory firms engaged in connection with ordinary business and litigation;
- IT service providers.

Personal Data will not be disseminated, unless required by law.
With respect to the Personal Data disclosed to them, recipients in the above categories may operate, as the case may be, as data processors (in which case they will receive appropriate instructions from the Data Controller) or as independent data controllers.
The Company guarantees that it will take the utmost care to ensure that the disclosure of Personal Data to the above recipients will be restricted to the information necessary to achieve the specific purposes for which the Personal Data are required.

8. Transfer of Personal Data outside the European Economic Area

Where this serves the purposes described in paragraph 4, Personal Data might also be transferred abroad to companies based outside the European Economic Area ("**EEA**"). Some of the jurisdictions outside the EEA might not guarantee the same level of Personal Data protection guaranteed within the EEA. In this case, the Data Controller undertakes to regulate the transfer and subsequent processing of the Personal Data through the *Standard Contractual Clauses* provided by the European Commission and to adopt every other safeguard required by article 46 GDPR if it is not possible to use one of the derogations listed in

article 49 GDPR.

9. Storage of Personal Data

The Personal Data will be stored in the Data Controller's filing systems, including automated ones, and protected by appropriate security measures, until the purposes described in paragraph 4 above have been achieved, after which they will be erased.

10. Rights of data subjects

Where applicable, and within the limits set by the GDPR, Data Subjects are entitled to:

- obtain confirmation from the Data Controller as to whether or not their Personal Data are being processed, and, where that is the case, access to the information listed in article 15 GDPR;
- obtain from the Data Controller the rectification of inaccurate Personal Data, or, taking into account the purposes of the processing, have incomplete Personal Data completed in accordance with article 16 GDPR;
- obtain from the Data Controller the erasure of Personal Data, where one of the grounds listed in article 17 GDPR applies;
- obtain from the Data Controller the restriction of processing of Personal Data in the cases listed in article 18 GDPR;
- receive - in a structured, commonly used and machine-readable format - the Personal Data provided to the Data Controller, so that the Data Subject may transmit those data to another data controller without hindrance, in accordance with article 20 GDPR;
- object to the processing of their Personal Data on the basis of their particular situation, unless there are compelling legitimate grounds for the processing that override their interests, rights and freedoms or compelling legitimate grounds for the establishment, exercise or defence of legal claims, in accordance with article 21 GDPR;
- withdraw their consent at any time. The processing of Personal Data carried out by the Data Controller before the withdrawal of consent, however, remains valid.

These rights may be exercised by emailing the DPO at dpo@eni.com.

Without prejudice to their right to initiate other administrative or judicial proceedings, Data Subjects also have the right to lodge a complaint with the competent supervisory authority (for Italy: *Garante per la Protezione dei Dati Personali*) if they believe that there has been a breach of their rights with regard to the protection of their Personal Data.

Annex TECH

Technical Guidelines

Overview of the HPC Infrastructure

The High-Performance Computing HPC6 system made available under this call for proposals is designed to support computationally intensive research and innovation projects. The infrastructure provides access to state-of-the-art computing resources, storage, and networking capabilities.

Compute Specifications

System type:	HPE CRAY EX235a
Processor type:	AMD EPYC 7A53 64-Core Processor
Number of Cores per Node:	64 cores (8 cores OS reserved)
Acceleration type:	AMD INSTINCT MI250X
Number of Accelerators per Node:	4 accelerators boards (2 GPU per accelerator)
Memory per Node:	512 GB (72 GB OS reserved)
Operating system:	RHEL 8.9

Network Specifications

Network type:	4x200Gbit Slingshot-11 per node
Network typology:	Dragonfly

Software Specifications

Batch scheduler:	Altair PBS pro 2024.1
GPU SDK:	AMD ROCm 6.1.2
Distributed calculator SDK:	OpenMPI 5.1.6

Storage Specifications

Home file system:	NFS (capacity 50GB/User)
Work / scratch file system:	LUSTRE (capacity to be agreed)
Backup:	N/A (no backup service offered/guaranteed)
Archive:	N/A (no backup service offered/guaranteed)