



*Promoting High-Quality Research Opportunities for
European Researchers in Mexico*

CONACYT- MINISTRY OF ENERGY

HYDROCARBONS SECTOR FUND

TERMS OF REFERENCE OF THE CALL FOR PROPOSALS

HYDROCARBONS– 2010 – 01

This document complements and expands the information described in the **CONACYT – SENER – HYDROCARBONS – 2010-01** Call for Proposals issued by SENER and CONACYT through the CONACYT - Energy Ministry - Hydrocarbons Sector Fund.

1. Specification of sector demands in relation to hydrocarbons

Based on the Research, Technological Development, and Specialized Human Resources Formation Program (the Program) presented by Petróleos Mexicanos and its Subsidiary Bodies (PEMEX) and approved by the Fund's Technical Committee, a set of needs have been identified to be addressed by the national scientific and technological community with the economic support of the Fund, through calls for submission of proposals. The present call for proposals addresses the Program's needs, from which the specific demands are derived. See annex on "Specific Demands:" <http://www.conacyt.gob.mx/Fondos/Sectorials/SENER/Hidrocarburos/2010-01/Demandas-Especificas 2010-01.pdf>. To determine the scope required by proposals, the noted annex provides information on each specific demand, including the following aspects:

- 1) Brief description of the specific demand
- 2) Background
- 3) Description of the technological problem
- 4) Objectives and goals
- 5) Outputs
- 6) Suggested execution period
- 7) Applicability



2. Presentation of proposals

2.1 Submitters must comply with all the required information outlined in the electronic application available through the CONACYT Project Administration Information System (*Sistema Informático de Administración de Proyectos -SIAP*). Any confidential information within the application must be indicated as such. Submitters must have a personal access code to the SIAP; if they do not already have one, the person responsible for the proposal should generate his/her corresponding access code through the online registration system of the CONACYT page: <http://www.conacyt.mx/test/bekas/nuevo.html>.

2.2 Preference will be granted to Group proposals. Proposals will be considered Group proposals when they include the participation of two or more entities.

2.3 Preference will also be granted to proposals from institutions in which a scheme is in place that considers the distribution among the institution's research group of any benefits generated through implementation of the project.

2.4 The proposal must be presented in the established format, available through the CONACYT web page: http://svrfm8.main.conacyt.mx/pls/enruta_url/pia_fondos.enrutar?conacyt=0.

Said format requires a complete description of the proposal (General Project Plan), which shall include, among others, the following points:

a) Background:

This section should present the contextual framework of scientific and technological knowledge and of the economic circumstances of the specific demand; it should include a brief description of the experience of the submitter in research work in the field of the project to be developed.

b) Objectives and goals:

This section should indicate the proposal's objectives and the specific goals for each stage of the project.

c) Anticipated results and outputs:

The results to be reached should be indicated in accordance with the execution periods for each stage.

The outputs and their specifications shall be defined for each stage of the project, addressing the needs of the user of the technology.

d) Methodology:

This section should describe the methodological foundation for the development of the project and achievement of the anticipated results, specifying the research lines to be developed.

e) Innovative content:

An analysis should be presented on the state of the art at the national and international levels of the scientific and/or technological matter within which the proposal is framed, indicating the innovative content of the knowledge to be generated or of its application.

f) Available work team and infrastructure:

This section should describe the scientific and technical capacities of the submitter and the infrastructure available for execution of the project, as well as the administrative capacity of the lead submitter.

g) Program of activities, budget and indicators:

The activities and the resources required in each of the stages of the project should be described, presented through the respective flowchart.

The execution stages must be well defined in the proposal and the targets for each of the stages must be indicated, referring to the points of control and/or critical activities that will allow verification of compliance and the progress of the outputs in each stage. In addition, periodic measurement parameters (quantitative and qualitative indicators) should be included that will assure timely monitoring and evaluation of each of the project stages.

h) Transfer mechanisms:

This section should describe the strategy to be followed for successful implementation of the technology developed.

In the case of presentation of technological research and development projects, submitters are recommended to consult Norm PYF-NMX-GT-002-IMNC-2008 in reference to technological projects.



The information included in this section should be consistent with that of the annexes, as specified below.

2.5 Annexed information (to be submitted in pdf files, as many as considered necessary by the lead submitter, with a maximum size of 2Mb each):

Annex I. General information regarding the competencies and capacities of the submitter in relation to the development of the project (maximum five pages).

Annex II. In the case of Group proposals, a collaboration agreement is required among the participants regarding development of the project. For the initial presentation of the proposal, it will be sufficient to submit a letter of intent and adherence from each of the Group participants, signed by the legal representative (format Annex II of letter of intent and adherence). The corresponding collaboration agreement will be required for formalization of support.

Annex III. Letter in which the lead submitter declares under oath that all the information is truthful, verifiable, and confidential, and that the submitter has no outstanding debts with CONACYT or suits filed against the same through any administrative or legal entity derived from projects supported in any program pertaining to CONACYT, including the Funds regulated through the Law on Science and Technology (format Annex III).

Annex IV. Project budget: information detailing the financial breakdown by concept, by activity, and by participating institution as well as researcher/consultant/postdoctoral collaborator/grant recipient to participate in the development of the project.

Annex V. Flowchart of activities (Gantt diagram) presented in Microsoft Project Manager or its equivalent in free software.

Annex VI. Technological Intelligence Study undertaken to define the line of research and/or development to be followed by the project and that supports the innovative content indicated in the proposal.



Annex VII. Strategy to be followed in relation to the Intellectual Property to be generated through the project, as well as the initial position of the institution or work group regarding the same.

Annex VIII. The scheme that the institution (or institutions participating in the Group) has established in relation to distribution among the research group of any benefits generated through implementation of the project.

2.6 All application duly completed and submitted in conformity with the specifications of the present Terms of Reference, within the established time period, shall be considered as a proposal. With no exception, no application submitted via any means other than that indicated, or incomplete, or presented outside of the established time period, shall be accepted or processed.

In addition to the requirements stipulated in the call for proposals, each of the national institutions that form part of a Group proposal must be currently registered in the National Registry of Scientific and Technological Institutions and Companies (*Registro Nacional de Instituciones y Empresas Científicas y Tecnológicas* –RENIECYT):

http://www.conacyt.gob.mx/reniecyt/Index_Reniecyt.html.

2.7 Proposals must specify a Technical Head, an Administrative Head, and a Legal Representative.

The first will be the person responsible for the execution of the project, the fulfillment of its objectives and goals, the generation of outputs, and the elaboration of progress and achievement reports. The second will be responsible for the administrative management and accounting of the operations undertaken for the execution of the project, the correct application and documentation of the resources channeled by the Fund, and the elaboration of the required financial and administrative reports. The third will hold the powers necessary to legally represent the institution, assume the obligations in the terms of the present call for proposals and the Resources Assignment Agreement, and sign the last of these.



2.8 The proposals presented in Group must identify the lead submitter, which will be responsible for compliance with the contents of the proposal and for the signature of the Resources Assignment Agreement.

The lead submitter will also be responsible for project coordination and the technical head will carry out the function of “general head,” which includes integrating advances and results from the individual groups and maintaining the cohesion of the work team.

Proposals must include an itemization of the financial sums required by the project. Resources will be channeled through the administrative head, who must form part of the same institution to which the project leader pertains.

2.9 The participation of Foreign Entities incorporated in the projects may not exceed 50% of the support authorized to the project. These Entities do not require registration in the RENIECYT.

It is required that all Groups must include the participation of the equivalent of at least one national Higher Education Institution or Research Center.

2.10 General Considerations

- The technical head must dedicate more than 50% of his/her work time and schedule to the project.
- Subcontracting to third parties for implementation of the project may not exceed 30% of total project cost.
- In the financial itemization information, participating institutions should declare the cost of the personnel to participate in the project, even when support is not requested for this item or is ineligible in the terms of the institutional provisions of the participant.
- Group proposals should include the declaration by each participating institution of the infrastructure available and to be used by the institution in execution of the project.
- Proposals that include requests for support for equipment acquisition must present the following:
 1. The corresponding justification for each item of equipment.
 2. A presentation of the reasons for which the leasing or the contracting of services through third parties for implementation of tests within national territory or abroad are not viable, including a cost-benefit analysis of these options.

3. Programming of equipment acquisition should be in accordance with the stages of the project and the relevant activities of the same, and respond to the absolute minimum indispensable for the project.
4. The request should note the future use which may be made of the equipment acquired through the Fund, if authorized, within research lines or projects that address specific areas related to the object of the Fund and its priorities, as well as the elements of the infrastructure that will contain said equipment and the respective maintenance.
5. The request must include a letter of commitment from the institution, through which the institution grants facilities so that in the future and even in absence of participation of the institution in the realization of projects of the Fund, other research institutions may use the equipments whose acquisition was supported by the Fund.

This section should also indicate the provisions established in reference to the reserve of tests to be carried out or have available on an annual basis for the different national research groups that require the same for execution of Fund-financed projects.

For the cases in which equipment acquisition is requested, the above-listed numbers 1 through 5 shall be obligatory and shall be incorporated within one sole file in the annex section within the data-processing system implemented for this purpose on the part of CONACYT.

- The proposals in which Foreign Entities participate to the equivalent of up to 50% of the total amount of the project must present the following:
 1. The corresponding justification for inclusion of the participation of the Foreign Entities.
 2. Explanation of the reasons for which the execution of said services within national territory is not viable or the need to establish these technological alliances to complement capacities, referring in both cases to the cost-benefit analysis of the same.
 3. The corresponding justification that no substitution or displacement of national capacities exists.



3. Amounts of Support:

The Fund may allocate economic resources for up to 100% of the budget of the eligible categories presented in the proposals, subject to the amount authorized by the Technical Committee, and to the availability of budget funds of the Fund.

4. Eligible Categories:

All expenses and investments directly related to execution of the project and which, at the discretion of the Evaluation Committee and/or the Technical Committee of the Fund, are deemed indispensable for the successful execution of the project, shall be eligible for finance through Fund-allocated resources. Said expenses and investments must be fully justified and include the following categories:

1. Expenses for specialized personnel directly related to the project (worker/hour cost) that are not financed with public resources or through other funds or programs, if and when the expenses of said personnel are originally covered by resources self-generated or pertaining to the institution. Those who are paid with resources derived from the authorized budget as supported entities will not be eligible.
2. Travel expenses and per diems incurred and paid by the personnel directly related to the project and for activities connected to the same.
3. Expenses related to the registration of intellectual property protection deeds at the national or international level in the framework of the PCT, which must be consistent with the proposed strategy for protection of intellectual property.
4. Technological studies and analyses, as well as technological diagnoses, audits, or surveillances.
5. National technological advisory and consultancy directly related to the project up to a maximum of 30% of the total amount of the project.
6. Technological collaboration, advisory, and consultancy from foreign institutions on issues directly related to the project (up to a maximum of 50% of the total amount of the project).
7. Operating expenses related to the project, such as expenses for: materials; laboratory and pilot plant operation and equipment rental; designs and prototypes for experimental

trials; bibliographical archives, documentation, and scientific and technological information necessary for the project; acquisition of instruments, testing tools, and related special software equipment and information systems for operation of equipment dedicated to Technological Research and Development, necessary for execution of the project.

8. Financial audit expenses.
9. Others associated with activities directly related to execution of the project.
10. Attendance at national or international congresses that is duly justified and directly related to the project to be developed, if and when it is congruent with the advancement of the project stages and is indispensable for the same. Specification should be made in this category of the use of the information and the obligation of protection of confidential or reserved information and absolute respect for intellectual property rights.

5. Non-Eligible Categories

All those activities, materials, and expenses related to operative tasks, be they administrative, productive, sales, distribution, marketing, etc., and all those equipments, machinery, tools and civil works whose purpose relates to production or commercialization activities of the submitter, shall NOT be eligible for application of Fund resources. Categories that are not eligible for application of resources from the Fund include the following:

1. Civil works
2. Administrative expenses
3. Debts and provisions for possible losses or debts
4. Interests
5. Expenses financed with public funds or any other fund or program
6. Acquisition of real estate properties, unless indispensable for direct execution of the project
7. Losses due to currency exchanges
8. Taxes, including IVA
9. Credits to third parties
10. Fines
11. Financial expenses, including bank transfers
12. Maintenance of Intellectual Property rights
13. Vehicle acquisitions (in cases in which the use of such goods is required, a leasing contract may be allowed)



6. Duration of the Project

The duration of the projects will take as reference the considerations established in each of the specific demands (see annex on "Specific Demands").

7. Evaluation Process

The Evaluation Committee is the collegiate and authorized body to direct the evaluation process of the proposals. As part of the evaluation process, said Committee may support its work through members of the RCEA to verify that the proposal complies with the requirements established in the call for proposals and evaluate it in conformity with the criteria established in the present Terms of Reference.

Given that the evaluators will have only the information contained in the proposal for the purpose of carrying out their evaluation, the clarity and quality of the proposal will be fundamental factors for its correct appreciation.

Based on the respective evaluations, the Evaluation Committee will prepare its opinion on the proposals and submit those deemed favorable for the consideration of the Technical Committee of the Fund, which holds the faculty to approve the projects and the allocation of resources.

The agreements of the Evaluation Committee and the Technical Committee are final and are not subject to appeal.

More than one project may be approved to address one specific demand, when it is determined that the projects address the demand from distinct lines of research and increase the probability of success in addressing the corresponding need.

8. Evaluation criteria

In the evaluation process, the following criteria, among others, will be taken into consideration in the evaluation and selection of the proposals susceptible to receive support from the Fund:

8.1 Pertinence of the proposal

Congruency of the objectives with the problem or need to be resolved (correlation between the objectives and the proposed solution with the anticipated results).

8.2 Innovative content

- a) In the generation of knowledge.
- b) In the application of knowledge for solution of the problem or need.
- c) In the use or generation of existing materials, processes, services and technologies.

8.3 Technical-financial viability

- a) Congruency of the objectives, goals and expected products.
- b) Proposed methodology or research protocol.
- c) Correspondence of the activities with the budget, goals, and expected products.
- d) Execution capacity:
 - Technical capacity of the work team: quality and quantity of scientific and technological personnel involved in the proposal, in relation to the established objectives and goals.
 - Administrative and management capacity: the mechanisms considered to guarantee the integration, efficiency and direction of the work group. The resources and administrative services committed by the submitting entities to assure the integral application of the resources to the project, and the accountability and success of the project. Available infrastructure, instruments, laboratories, equipments, pilot facilities, computer equipment, and other equipment necessary for the success of the project.

8.4 Technical-economic impact and benefit

- a) On the technical and economic indicators related to the project and the problem or need addressed.
- b) On the generation of scientific, technological, and innovative advancement.
- c) On the formation of human resources required by the hydrocarbons sector.
- d) On the consolidation of scientific and technological infrastructure.

8.5 Feasibility of transfer, assimilation and adoption of project results

Preference will be granted to proposals whose plan of action includes clear presentation of the scheme through which the results will be transferred, assimilated and applied by the users affected by the problem or need that originated the project.

8.6 Commitments of the submitter

- a) Commitment of available personnel and infrastructure.
- b) Disposition to share the non-sensitive essential intellectual property to the business.
- c) Concurrent resources (not mandatory but desirable).

8.7 Time and cost of execution

Preference will be granted to proposals that, all else being equal in terms of quality and degree of innovation, offer advantages in terms of the time and/or cost of execution.

8.8 Linkage among or with public or private Higher Education Institutions (HEI) or Research Centers (RC)

Preference will be granted to proposals that link HEI and/or RC as well as those proposals that link companies with the same.

8.9 Business Profile

- a) Form in which subsequent stages of the project may be developed to foster industrial and production upgrading.
- b) Viability for the implementation of the technology developed as a profitable business (under the assumption that the project is successful).



- c) Scheme to be used in the handling of the intellectual property resulting from the project (identifying the rights and obligations derived from the products in intellectual property matters).

8.10 Benefits Distribution Scheme

The scheme existing in the institutions for the distribution among their research teams of any benefits derived through implementation of the project.

9. Assignment and periodicity of resources

The assignment of resources in favor of the Support Subject to finance the implementation of the project will be formalized through the Resources Assignment Agreement. No resources may be released prior to signature of the Agreement.

The resources will be delivered in accordance with the stages defined in the flowchart of activities established to cover the total duration of the project. The first and second installments may not exceed 40% of the total approved budget, and the third and final installment will be for the total outstanding amount to complete the total of 100%.

In the case of Group proposals, a collaboration agreement signed among the participating institutions must be presented, in which is formally established the identity of the entity that will represent the remaining participating institutions in the Group's relations with the Fund. The noted Resources Assignment Agreement will then be signed between the Fund and the Group-designated entity, which will be responsible for assuming the commitments in the name of each of the participants of the Group.

10. Conditions of support from the Fund

10.1 Proposals that are receiving economic resources from other funds regulated through the Law on Science and Technology and/or other CONACYT programs will not be considered susceptible to receive resources from this Fund. The same will apply in the case of proposals that, in the opinion of the Technical Committee or CONACYT, are considered as a lesser variant of previous proposals.

10.2 Proposals whose technical or administrative heads hold pending technical or financial commitments in relation to previously-completed projects in relation to any CONACYT fund or program, may not be benefited through the present Fund.

11. Notification of proposals to be supported and time period for formalization of authorized supports



11.1 The results of the proposals to be supported by the Fund will be published in the same media used for the call for proposals, within ten working days following the meeting of the Fund's Technical Committee in which the projects will be authorized.

11.2 Once the submitters have been notified of approval of the project, they have a maximum of forty-five calendar days for the formalization of the Resources Assignment Agreements. The submitters must present the required documentation at least one week prior to the conclusion of this established time period. Lack of formalization for reasons attributable to the submitters will result in the automatic cancellation of the support.

12. Monitoring of projects and evaluation of results

During the execution of the projects, the Fund, through the Evaluation Committee and other competent bodies, will undertake technical and financial monitoring of the same, on a continuous basis and/or in each of the project's stages. Said entities will also follow up on the results and benefits obtained upon finalization of the project, which may serve as a basis for the allocation of subsequent supports, as established in Article 12 of the Law on Science and Technology. The monitoring and follow-up of the projects will be carried out in conformity with the provisions established in the Rules of Operation of the Trust Fund.

Based on the reports presented by the Support Subjects, the advances made and achievements reached by the Fund may be published as part of the commitment of accountability and transparency in the exercise of public resources.

13. Confidentiality and handling of information

13.1 The incorporation of confidential information shall be the responsibility of the submitter who must identify it with the corresponding label. Information not labeled confidential will be considered public. Persons who have confidential information in their custody or power will be obligated to maintain it in said quality. Those who fail to comply with this provision will be sanctioned in conformity with the provisions established in applicable penal or administrative laws.

13.2 The evaluators, members of the Technical Committee of the Fund, and in general any person who participates in the process of reception and evaluation of proposals, is obligated to not divulge to third parties, reproduce, and/or distribute by any means, or conserve in his/her power, the material submitted for his/her consideration, being obligated to maintain absolute secrecy regarding the information handled during the process. Incompliance with this obligation will be sanctioned in the terms indicated in the previous paragraph.



13.3 Regarding the handling of the information that is not labeled in the proposal as confidential, said information may be released in accordance with the provisions of the Federal Law on Transparency and Access to Public Governmental Information.

14. Intellectual Property

The terms and conditions regarding the handling of the intellectual property rights (copyrights and/or industrial property rights) generated through the project shall be established in an agreement signed between the Support Subject and the user of the technology, in accordance with that which the decision-making bodies of the Fund evaluate to be pertinent in each case and following agreement with the Support Subject.

15. Ethical provisions

The Support Subject shall assume the obligation to comply, and to assure compliance, during the development of the project and until its conclusion, of the applicable legislation, especially in ecological matters, protection of bio-security and biodiversity, and in respect for the conventions and protocols in ethical matters applicable to research, the applicable legislation and institutional norms in security matters, and all matters addressed by the Mexican Official Norms. Those projects whose execution requires the use of radioactive materials or toxic or pathogenic substances must be approved by the official security body or corresponding institution (National Commission on Nuclear Security and Safeguards, etc.). Projects in which authorization is required for exploration or digging must have the permit from the corresponding entity.

16. Unforeseen situations

Situations unforeseen in the present Call for Proposals will be resolved by the Technical Committee of the Fund.

17. Additional information

Those interested may write to the following electronic mail address for any clarification or additional information regarding the present Call for Proposals: ayudahidrocarburos@conacyt.mx.

18. Glossary of terms

The following definitions are applicable for the effects of the present Call for Proposals and Terms of Reference:



Technical Committee: The Technical and Administrative Committee of the Trust Fund.

CONACYT: The National Council on Science and Technology (*Consejo Nacional de Ciencia y Tecnología*)

Resources Assignment Agreement: The legal instrument signed by the Support Subject with the Fund through the Trustee to formalize the allocation of resources for execution of a project, in which the terms and conditions of support are established.

RCs: Research Centers

Fund: The CONACYT-Energy Ministry- Hydrocarbons Sector Fund

HEI: Higher-Education Institutions

LST: Law on Science and Technology

FLR: Federal Law on Rights

General Project Plan: The document in which the objectives, stages, goals, activities, calendar, financial amount, anticipated results and products or outputs, impacts, qualitative and quantitative benefits, and time periods of the project are established.

Submitter: The person or legal entity who, in accordance with the Call for Proposals and/or the provisions of Article 254bis of the FLR, presents a proposal for consideration by the Fund.

Proposals: The requests for support presented in accordance with the Calls for Proposals by the Submitters and/or in exceptional cases through the provisions of a collaboration agreement with Petróleos Mexicanos and its Subsidiary Bodies, and are susceptible to receiving support from the Fund.

Project: Set of activities oriented to the achievement of a final objective and associated with time parameters (activities flowchart), cost (budget and cash flow) and quality (assurance of the quality of the processes). This is the term that will be used following the approval of a proposal by the Committee.

Consolidated or Group Proposals: The grouping of projects undertaken by distinct institutions and integrated as one sole project for the purpose of presenting a unified proposal, designating one of the participating institutions as Group representative and if the project is approved as Support Subject.



RCEA: The CONACYT Registry of Accredited Evaluators.

RENIECYT: The National Registry of Scientific and Technological Institutions and Companies (*Registro Nacional de Instituciones y Empresas Científicas y Tecnológicas*) managed under the direction of CONACYT, in which the beneficiaries of resources must register in conformity with the provisions established in Article 25, fraction II of the LST.

Administrative Head: The person who assists the Technical Head and who holds responsibility for the accounting and administrative control of the application and documentation of the resources channeled to the project and for the elaboration and delivery of financial progress reports.

Technical Head: The person responsible for execution of the project, for compliance with the General Project Plan, and for the elaboration and delivery of the technical progress reports.

Support Subjects: The executors of the projects carried out with resources from the Trust Fund, in the terms of the provisions of the LST and Article 254bis of the FLR.