



European
Commission
Innovation and
Networks Executive
Agency (INEA)

Connecting Europe
Facility

Action Status Report (ASR)

Reporting period: 1 January 2016 - 31 December 2016

1. INFORMATION ON THE ACTION

Grant Agreement N°	INEA/CEF/ENER/M2014/0032
Action number	2.7-0023-FRES-S-M-14
Action title	Studies for a new Atlantic electrical interconnection between Spain and France
PCI (for energy only)	2.7 PCI France - Spain interconnection between Aquitaine (FR) and the Basque country (ES)

Author of the report

Name	Sandrine Valadeau
Position	Project Manager - European Affairs Directorate
Entity	RTE France - Réseau de transport d'électricité
Telephone N°	+33 (0)1 41 02 10 90
E-mail	Sandrine.valadeau@rte-france.com

2. INFORMATION ON THE PROGRESS OF THE ACTION (GA II.23.1.1.c or SESAR FPA II.23.1b.c)

2.1. Overall progress of the Action until the end of the previous reporting period

Planned dates (GA)		Previous ASR dates		Actual dates		Technical progress achieved at the end of the previous reporting period (%)*
Start	End	Start	End	Start	End	
01/09/2014	30/09/2017	01/09/2014	31/12/2016	01/09/2014	30/09/2017	85
*Please explain how the percentage of the progress achieved has been estimated/calculated						
We compared the results achieved with the expected ones. These results have then, in that perspective, been affected by a factor proportional to their completion state. The percentage has been calculated on this weighting basis of technical progress.						

Overview of progress since the start of the Action

The overview should include a description of the actual progress until at the end of the previous reporting period, referring to the main issues, milestones and events that affected progress.

Activity 1. Geological and sea current studies:

- Milestones 1 (detailed specification of the geotechnical campaign), 2 (start of the geotechnical campaign), 3 (geotechnical campaign report), 4 (sea current measurement instruments installation) and 5 (database of measurements compiled) are completed.
 - Milestone 6 (sea current measurement report) is not completed yet.
- Due to difficulties encountered on corridor 3, a new route had to be investigated : during the differential bathymetry studies on corridor n°3, major erosion and accretion areas were identified in the Capbreton canyon crossing areas, demonstrating much more sediment activity than previously observed and not compatible with a cable crossing. As a consequence of this, further investigations were needed to identify

another suitable crossing solution.

Technical explanations of main issues and events per milestones:

- Milestones 1 and 2: already finished in previous ASR.
- Milestone 3: completed. The Geotechnical campaign took place from the 9th to 23rd of September 2015. Samples were then analyzed.
- Milestones 4: already finished in previous ASR.
- Milestone 5: on-going: Sea current measurement devices were installed again in autumn 2016 and are planned to be recovered in April 2017.

Activity 2. Environmental and social studies:

- Milestone 7: already finished in previous ASR.
- Milestone 8: completed.

Study area of the best marine routes completed.

Study area first analysis to shortlist the 3 of the best landing points on the French and the preferred landing point at the Spanish coast completed.

From 2014 to 2017, several environmental studies have been carried out. The process began with an extensive preliminary study of environmental feasibility, with the aim to analyze the environmental difficulties that the Western Spain-France interconnection in Biscay Gulf can present. A multicriteria analysis of all the environmental and social factors have been performed in the terrestrial part (density of people, topography, infrastructures and protection figures) as well as in the marine part (marine dynamics, fishing grounds, port exclusion zone, military areas). This analysis determined the viable areas that have the best conditions to accommodate the elements involved in this type of installation (outgoing to the sea of the power line and connection to the existing electricity grid). Ecological pre-diagnosis on the 3 possible terrestrial routes in France have been performed.

Activity 3. Technological studies:

- Milestone 9: completed.
- Milestone 10: on-going.

First analysis on the HVDC technology and the cable system technology and voltage completed.

Analysis of the manufacturing processes, laying and protection for the subsea cable, and on the ability to cross main rivers completed.

Workshop held with French specialists to define the best maritime route taking into account the hydro-sedimentary activity along the French coast.

2.2. Progress per activity

Activity 1	Title	Planned Start/End date ^(GA)		Previous ASR Start/end dates		Actual Start/End date		Technical progress achieved until the end of the previous reporting period (%) [*]
	Geological and sea current studies	01/09/2014	30/09/2017	01/09/2014	31/12/2016	01/09/2014	30/09/2017	75
*Please explain how the percentage of the progress achieved has been estimated/calculated								
We compared the results achieved with the expected ones. These results have then, in that perspective, been affected by a factor proportional to their completion state. The percentage has been calculated on this weighting basis of technical progress. In this case almost of the activity is finished taking into account that the bathymetric survey is finished (50%), the first geotechnical campaign is finished (20%) and the measurements devices for the second campaign are installed (5%).								
Milestone no	Title ¹	Planned completion date ^(GA)		Previous ASR date	Actual completion date	Reached (Y/N)		
1	Detailed specification of the geotechnical campaign	31/05/2015		27/11/2014	27/11/2014	Yes		
Explanation for any deviation from planned completion date								
In order to have the geotechnical campaign achieved during the 2015 summer, it was necessary to anticipate its detailed specification before end of 2014.								
2	Start of the geotechnical campaign	31/10/2015		27/08/2015	27/08/2015	Yes		

Explanation for any deviation from planned completion date					
The award process was quicker than expected and the contract has been awarded rapidly enough to allow an earlier start of the 2015 summer campaign.					
3	Geotechnical campaign report	31/07/2016	31/10/2016	31/05/2016	Yes
Explanation for any deviation from planned completion date					
The coring analysis appeared to be quicker than we expected, but the analysis and approval of the final report has been done in last planned completion date.					
4	Sea current measurement instruments Installation	30/11/2015	17/08/2015	17/08/2015	Yes
Explanation for any deviation from planned completion date					
The award process was quicker than expected and the contract has been awarded rapidly enough to allow an earlier start of the 2015 summer campaign.					
5	Database of measurements compiled	30/06/2016	03/11/2015	03/11/2015	Yes
Explanation for any deviation from planned completion date					
As a consequence of the advancement of Milestones 1, 2 and 4, interim results could be available sooner than forecasted.					
6	Sea current measurement report	30/09/2017	30/12/2016	30/09/2017	No
Explanation for any deviation from planned completion date					

Activity 2	Title	Planned Start/End date ^(GA)		Previous ASR Start/end dates		Actual Start/End date		Technical progress achieved until the end of the previous reporting period (%)*
	Environmental and social studies	01/09/2014	30/09/2016	01/09/2014	30/09/2016	01/09/2014	30/09/2016	100
*Please explain how the percentage of the progress achieved has been estimated/calculated								
We have finished this activity achieving all the results expected.								
Milestone no	Title ¹	Planned completion date ^(GA)		Previous ASR date	Actual completion date	Reached (Y/N)		
7	Detailed specification of the Environmental and social report	30/06/2015		01/09/2014	01/09/2014	Yes		
Explanation for any deviation from planned completion date								
We managed to begin this activity sooner than expected.								
8	Environmental and social report	30/09/2016		30/09/2016	30/09/2016	Yes		
Explanation for any deviation from planned completion date								
We have achieved this milestone this summer with an ecological pre-diagnosis on the 3 possible terrestrial routes in France.								

Activity 3	Title	Planned Start/End date ^(GA)		Previous ASR Start/end dates		Actual Start/End date		Technical progress achieved until the end of the previous reporting period (%)*
	Technological study	01/12/2014	30/09/2017	01/12/2014	31/12/2016	01/12/2014	30/09/2017	75
*Please explain how the percentage of the progress achieved has been estimated/calculated								
We compared the results achieved with the expected ones. These results have then, in that perspective, been affected by a factor proportional to their completion state. The percentage has been calculated on this weighting basis of technical progress.								
Milestone no	Title ¹	Planned completion date ^(GA)		Previous ASR date	Actual completion date	Reached (Y/N)		
9	Detailed specification for advisory external support in technological study	31/12/2015		31/12/2015	31/12/2015	Yes		
Explanation for any deviation from planned completion date								
10	Technological report	30/09/2017		31/12/2016	30/09/2017	No		
Explanation for any deviation from planned completion date								
We are gathering information to develop the final report.								

2.3 Description of the activities' progress in the previous reporting period

- a)** *Provide a description of the actual progress of the activities compared to what was planned (as stated in the Grant Agreement for the first ASR, otherwise in the previous ASR). Provide a justification for any planned activities which were not carried out.*
- b)** *Provide information on any new task that was not planned during the previous reporting period, but was considered necessary for the successful implementation of the Action (even if outside the Action).*

a) Actual progress of the activities

Activity 1: Geological and sea current studies

- Geotechnical campaign:

27 cone penetrometer tests and 32 core drilling field samples were lab tested. Final report had been developed.

- Sea current measurements:

Partnership with IFREMER institute has been going on during 2016. Sea current and sediments measurement devices were installed in summer 2015 at 3 different locations in the submarine canyon (water depths: 300 m, 1000 m and 1500 m). They were recovered in summer 2016, later than expected (spring 2016) because of bad weather conditions at the vessel availability window.

Activity 2: Environmental and social studies

- Environmental pre-feasibility studies
- Social pre-feasibility studies

These studies assessed the main environmental and social sensitivities on 4 possible corridors at sea. Focus was also made on the possible landing points on the French and Spanish coasts and on their routes to the Cubnezais and Gatica 400 kV substations, taking into account activity 3 results. During 2016, once a feasible location of the project was determined and agreed, we have developed the deliverable established in the agreement, with the aim to properly focus the Environmental Assessment scope. Ecological pre-diagnosis on the 3 possible terrestrial routes in France have been performed as an input for the Environmental Impact Study.

Activity 3: Technical Studies

Identification of the technological solutions: In 2016 we kept going on defining the technical solutions and we came to the following conclusions:

- Converter Technology: VSC
- Rate of the converter: 2000 MW
- Cable technology and rating: XLPE or MI technology, above 320 kV
- First system studies for converter specifications

Cable route design and installation processes: In 2016 we concentrated on hydro-sedimentary issues on the French coast. Experts strongly advised us to lay the cable a little bit further from the shore than we expected because of potential sand dunes and

sediment movements. These would lead to major difficulties during cable laying operations and may put the cable at risk in the long term. Hence, it was decided to have a cable route in the French waters close to the 5 milles line instead of the 3 miles one.

b) New tasks or activity during the reporting period.

Activity 1: Geological and sea current studies

- Geotechnical campaign:

A differential bathymetric analysis showed important periodic changes in canyon talweg morphology in corridor 3, leading us to give up this area. Hence, pursuing the same overall goal, studies were ordered to two different companies in order to assess the feasibility, consistency, cost and schedule of a drilling under the Canyon. The location of such a drilling should be 1 to 2 km far from the shore.

- Sea current measurements:

Because of the new findings explained in the previous point, we considered that another campaign was needed to strengthen our understanding of the canyon behavior. Hence, the installed devices were recovered in summer 2016 and a new set was implemented during the same campaign, to be later recovered in spring/summer 2017 so that data of one more winter (when the activity of the canyon is greater) will be gathered for the study.

2.4. Conclusions on preliminary results of the Action achieved in the previous reporting period on 1) the objectives of the Action, 2) the completion of the planned activities, 3) the cost-breakdown and 4) Action end date, including the impact of the possible deviations from the planned activities and milestones.

- 1) objectives of the Action
- 2) completion of the planned activities
- 3) cost-breakdown
- 4) Action end date

1) Objectives of the Action:

As the main reason for the amendment, additional results obtained beginning of 2016 confirm the feasibility of the route/corridor 3 through the Capbreton's Canyon, as well as route/corridor 6. Nevertheless, the two drilling studies confirm the feasibility of such works. Hence, no information of a potential impossibility appeared from the studies performed.

2) Completion of the planned activities:

- Activity 1 is still on-going. Sea current measurements reports will be finalized in September 2017.
- Activity 2 is completed.

On the Spanish side, different viable alternatives for each of the project elements Station Converter, Point of landing or beach joint, electric line in air and submarine cable were established, according to the existing environmental conditions, evaluating the potential impacts of each of these alternatives and the main preventive and corrective measures to be taken into account in the project.

On the French side, once the 3 possible routes to Cubnezais from the 3 landfall have been defined, an ecological pre-diagnosis has been performed as an input to the EIS.

- Activity 3 is still on-going. Part of the results of Activity 1 are very important to finalize the evaluation on the cable laying and protection technology and procedures. Until now we think that on the French side, thanks to the experts' advice, a marine route following the 5 Milles line should limit risks caused by hydrosedimentary movements.

3) Cost-breakdown:

To be assessed from the excel sheet

4) Action end date:

Unchanged, the same as in the grant amendment (30/09/2017)

2.5. Description of the activities' progress planned in the on-going reporting period and until the end of implementation of the Action

Provide a description of the:

- a) planned progress of the activities in the on-going reporting period.*
- b) planned progress of the activities to be performed beyond the on-going reporting period up until the end of the implementation of the Action (if the on-going reporting period is not the last one).*
- c) tasks related to the compliance with the EU legislation (such as environmental, procurement, etc.).*

a) Planned progress of the activities in the on-going reporting period:

- Activity 1: Sea current measurements reports will be finalized September 2017. This will close Activity 1.
- Activity 2: already finished.
- Activity 3: the latest results from activity 1 will be analyzed and will allow us to complete milestone 10.

b) Planned progress of the activities to be performed beyond the on-going reporting period up until the end of the implementation of the Action: Not Applicable

c) Tasks related to the compliance with the EU legislation: No pending issues regarding compliance with EU and national legislation.

3. VISIBILITY OF UNION FUNDING (GA II.23.1.1.i or SESAR FPA II.23.1b.i)

What measures have been taken within the previous reporting period to publicize the Action, including EU funding (GA II.7.1)?

The role of the INEA on helping REE and RTE to carry out this essential action has been systematically reminded in contacts with Spanish and French authorities.

REE and RTE have informed all associated contractors / subcontractors that this action is funded with EC grants and that they have to include the information to ensure the publicity of this participation.

This co-financing has been understood as an interest from the European Commission of supporting the reinforcement of the interconnections between Spain and France. This support has reinforced the existing interest of the Spanish and French Governments in building the new facility line. Internal publicity efforts have been made in REE and RTE. As soon as any public communication is made (in particular as soon as a Website is created), the EU funding will be systematically publicized, but so far, as no publication has been made, this topic is not relevant.

4. OTHER SOURCES OF EUROPEAN UNION FUNDS (CEF-E only, GA II.23.1.1.m)

If applicable, provide information about other sources of EU funds (CEF, ERDF, Cohesion Fund, H2020, TEN, EEPR, EIPA, etc.) used for the project of common interest (e.g. previous or subsequent phases not covered by the Grant Agreement).

TEN-E: «Studies for a new Western interconnection between Spain and France»
Contract n°: 2013-E354/13-ENER/13/TEN-E - SI2.675752
Covered period: from March 2013 to June 2015
A new CEF subsidy has been asked for the subsequent phase of the project in November 2016.

5. COMPLIANCE WITH EU LEGISLATION (GA.II.23.1.1g and h, or SESAR FPA II.23.1b.g and h)

5.1. Environmental information within the previous reporting period: overview of environmental aspects, compliance with EU and national legislation, possible issues during the implementation of the Action and measures taken.

Geophysical and geotechnical measurements have been achieved late 2016 without any environmental impact.

5.2. Where relevant, information on the compliance with EU legislation: - information on the contracts awarded for the implementation of the Action and on compliance with the requirements set out in GA II.9 and II.10 - regarding other matters, notably public procurement, competition, regulatory matters, (CEF-E only) the update of the CBCA decision, etc.

- EUOJ Call for tenders « Bathymetric surveys services n°2014/S 218-386444 » published November 12th, 2014
 - EUOJ Contract Award Notice 2015/S 119-218564 published June 26th, 2015, for the service « Bathymetric surveys services n°2014/S 218-386444 »
 - EUOJ Call for tenders « Environmental impact assessment for construction n°2015/S 158-291497 » published August 18th, 2015
 - EUOJ Call for tenders "Marine Surveys" : EUOJ Contract Award Notice 2015/S 243-442594 published December the 16th 2015, for the service "Geophysical reconnaissance survey, UXO and Geotechnical surveys in the Bay of Biscay for power cable"
 - EUOJ Call for tenders "Marine Assistance" : EUOJ Contract Award Notice 2015/S 226-412226 published November the 21st 2015, for the service "Marine Consultant Biscay Gulf Western Interconnection FR-ES"
- No other matters related to competition or regulatory matters.

6. IMPLEMENTATION SCHEDULE, GOVERNANCE AND MONITORING, OTHER RELEVANT ADMINISTRATIVE PROVISIONS (GA II.23.1.1.k and I, or SESAR FPA II.23.1b.k and I)

6.1. In the first ASR, information on implementation schedule, such as critical path, key performance rates and risk analysis; in subsequent ASR, information on any modifications and, if applicable, on the progress of the implementation of the arrangements referred to in previous ASR. If there are changes in the Action timetable as compared to the latest planning (Grant Agreement or previous ASR), attach an updated Gantt chart.

GANTT: Xcel file attached

The risk analysis submitted in the proposal has been updated in light of the actual progress of the studies:

Activity 1: Geological sampling and sea current studies:

Risk identified: It is possible to obtain negative results about the ability to lay and protect the cable crossing the canyon due to mudslides or erosion caused by turbidity events.

- Impact: High, Likelihood: High, control: Beyond (unchanged)
- Preventive/Mitigating measure identified: Alternative route with low dependence with the "Capbreton canyon" is also included in the study.

Update: Risk turned real. Alternative routes studied in 2016.

Activity 2: environmental and social Studies:

Risk identified: Unacceptable environmental impact to construct land sections due to flood, urban areas (unchanged).

- Impact: High, Likelihood: Medium, control: Under (unchanged)
- Preventive/Mitigating measure identified: Alternative route with different amounts of land section is studied.

Update: Activity finished: alternative routes with different land sections were studied.

Activity 3: Technical studies:

Risk identified: Unavailable technology to lay and protect the cable in the seabed due to the depth, the slopes and turbidity events

- Impact: High, Likelihood: Medium, control: Under (unchanged)
- Preventive/Mitigating measure identified: Alternative route with low dependence with the "Capbreton canyon" is also included in the study.

Update: Update: Risk turned real. Alternative routes studied in 2016.

Action's implementation technical progress (cumulated %)

	2014		2015		2016		2017	
Action level	Previous ASR	Current ASR	Previous ASR	Current ASR	Previous ASR	Current ASR	Previous ASR	Current ASR
	25	25	55	55	100	85		100
Activity	Previous ASR	Current ASR	Previous ASR	Current ASR	Previous ASR	Current ASR	Previous ASR	Current ASR
1	10	10	55	55	100	75	100	100
2	25	25	50	50	100	100	100	100
3	0	0	60	60	100	75	100	100

6.2. In the first ASR, information on governance and monitoring of the Action, such as organizational structure, internal coordination, communication and reporting, and decision making process; in subsequent ASR, information on any modifications and, if applicable, on the progress of the implementation of the arrangements referred to in previous ASR.

The action is performed under INELFE supervision since October 2015.

INELFE (INterconnexion Électrique France-Espagne) is a mixed company, incorporated on October 1, 2008 as a joint investment by Spain and France's electric grid managing companies, REE (Red Eléctrica de España) and RTE (Réseau Transport d'Électricité), following the agreement signed in Saragossa on June 27th, 2008 and in line with prior recommendations from the European coordinator Mario Monti.

The company was created with the aim of carrying out the new electric connection between Baixas (France) and Santa Llogaia (Spain.) The line has started operating in 2015.

INELFE is a joint stock company governed by French law.

- The internal coordination, communication and reporting and decision making process, is insured as follows:
 - o Technical decisions are proposed by INELFE Technical Committee to INELFE Advisory Board
 - o Communications decisions are proposed by INELFE Communication and Permitting Committee to INELFE Advisory Board
 - o INELFE Advisory Board to take every major decisions.

6.3. In the first ASR, information on other relevant administrative provisions, such as quality controls and audits; in subsequent ASR, information on any modifications and, if applicable, on the progress of the implementation of the arrangements referred to in previous ASR.

The project presents a high quality of technical and financial control through exhaustive technical monitoring and with control of costs charged to the project.

Both RTE and REE are ISO14001 compliant.

ANNEX: Financial information (GA II.23.1.1.d to f or SESAR FPA II.23.1b.d to f)

CERTIFICATION OF THE MEMBER STATE* (applicable only for ASR and for beneficiaries established in the European Union)	
Name	
Position	
Entity	
Telephone N°	
E-mail	
In compliance with Article II.23.1 (or SESAR FPA II.23.1b) of the GA, it is certified that the information provided by the following Beneficiary(ies) in the ASR is full, reliable and true. <input type="checkbox"/> Réseau de Transport d'Electricité <input type="checkbox"/> RED ELECTRICA DE ESPAÑA S.A.U.	
Date and signature	
Stamp (optional)	

* In line with the terms of Art. 22 of the CEF Regulation