

MINUTES OF THE BOARD MEETING TELECONFERENCE, 13 FEBRUARY 2014

Present:

Bernard Quoix, President (BQ)	TOTAL
Catherine Goy, Vice President (CG)	E.ON UK
Herwart Hönen, Treasurer (HH)	RWTH Aachen
Giovanni Cerri (GC)	University Roma TRE
Chris Lappee (CL)	Vattenfall
Pericles Pilidis (PP)	Cranfield University
Uwe Kaltwasser (UK)	MTU
Gary Lock (GL)	Frazer Nash Consultancy
Robert Rijdsijk (RR)	Shell
Andy Williams (AW)	Wood Group
Christer Björkqvist (CB)	ETN
Dominique Cornut (DC)	ETN

Content:

1. Welcome
2. Review and approval of the MoM Brussels Belgium, 9-10 December 2013
3. Review and report of action list from the MoM Brussels, Belgium, 9-10 December 2013
4. Questionnaire for the user community
5. AGM preparation
 - a. Annual General Meeting
 - b. Workshop
 - c. Update and review process of the Articles of Association and Internal rules
6. ETN finances for 2013 and budget for 2014
7. High Level User Meeting (HLUM) and dinner debate
8. Emeritus Club
9. Closing of the Board meeting

Annex: Review of Action List from previous Board meetings.

1. Welcome

B. Quoix opened the meeting and welcomed the Board members.

2. Review and approval of the MoM Brussels, Belgium, December 2013

The Board unanimously approved the December 2013 Board meeting minutes.

3. Review and report of action list from the MoM Brussels, Belgium, December 2013

The status of all actions is updated in the Annex. Some pending and on-going actions are detailed below with additional comments:

Wamar Engineering outstanding fee

C. Björkqvist reported that debt collector did not yet collect the outstanding fees for Wamar. U. Kaltwasser offered to send the contact details of Nabil Barakat to the ETN office in order for C. Björkqvist to follow-up directly with him. B. Quoix suggested to also put in copy Dominique Louveton from the Wamar office in France. The Board agreed that the email should claim the outstanding money as well as highlight the benefit for Wamar to be involved in ETN's activities in the future.

Action: BQ to send the contact details of Dominique Louveton (Wamar, France) to the ETN office.

Action: UK to send the contact details of Nabil Barakat to the ETN office.

Action: CB to send an email to Nabil Barakat, copying Dominique Louveton and UK.

IGTC-14: Keynote Session 4: OEM Panel Discussion

B. Quoix stated that he will send the contact details of Thierry Toupin, VP of Gas Turbine and Steam (Siemens) and Barbara Stanley, VP turbomachinery product (Solar Turbines) to the ETN office. C. Björkqvist mentioned that once he will have received the contact details, he would send them formal invitations to participate in the OEM panel discussion.

Action: BQ to send contact details of Thierry Toupin and Barbara Stanley to the ETN office.

Action: CB to send a formal invitation to Thierry Toupin and Barbara Stanley.

IGTC-14: Draft programme

C. Björkqvist reported that the CAB welcomed the Board's suggestions for the IGTC-14 programme. He also informed the Board that we have the opportunity to invite some people as chairman for the sessions.

The Board suggested inviting Luca Maria Graci from GE to sponsor the dinner. B. Quoix will send an email to him with sponsorship information. C. Björkqvist said that he would circulate the draft programme to the Board before the AGM in Paris.

Action: CB to circulate the draft programme of the IGTC-14 to the Board.

Action: BQ to send an email to Luca Maria Graci from GE with regards to the dinner sponsorship.

4. Questionnaire for the user community

C. Björkqvist stated that the purpose of the questionnaire would be to identify common issues amongst the user community in order for the OEMs and R&D community to address the most pressing issues. The Board suggested to clearly state on the first page the purpose of the survey. They also stressed the importance of giving the users an added value to this questionnaire to ensure a high return of response. B. Quoix stated that the identification of common issues for both oil & gas and utilities would allow him to guide Total's R&D strategy. The Board also agreed that ETN could use its Universities and research institutes by communicating them the results of the survey for them to focus their research on the common issues. C. Björkqvist suggested publishing the results once they are available and this idea was welcomed by the Board.

He informed the Board that that G. Lock and U. Kaltwasser made a template for the questionnaire. The main objective would be to have users listing the engine where they have the most issues with the biggest commercial impacts. A. Williams stressed that it might be problematic when the same model is operating in different countries, as an engine can have different defects depending on how/where it is operating. U. Kaltwasser suggested adding a question in the survey addressing A. Williams' concern (*e.g. Where are you operating your gas turbine?*).

With regards to the layout of the questionnaire, C. Björkqvist informed the Board that ETN would use an e-questionnaire integrated with ETN's website as well as in line with ETN's visual identity. The e-questionnaire would look professional, be secured and confidential and easy to use/complete. A budget of 1500 EUR has been reserved to implement this tool.

C. Björkqvist and G. Lock would adapt the questionnaire with the Board's suggestions and circulate it to the Board.

Action: CB to set-up a meeting with GL to discuss the questionnaire.

Action: CB to circulate a draft version of the questionnaire to the Board.

5. AGM preparation

Annual General Meeting, 2 April

C. Björkqvist presented the preliminary agenda of the Annual General Meeting and Workshop. He stated that it would be interesting to have a speaker from an oil & gas company to speak from a market point of view and that the ETN office could contact the representatives from Shell, Statoil and Total's in Brussels offices. The Board welcomed this idea and B. Quoix indicated that he could also try to localise someone high level that deals with policy at Total if needed. A. Williams also stated that the IGTC-14 needs to be discussed at the AGM.

In order to explain clearly and in a transparent way the proposed changes to the Articles of Association, C. Björkqvist proposed to involve the Board in a panel discussion during the AGM. The Board welcomed this proposition and agreed that this could be done before the question period.

Action: CB to localise a high level speaker from an oil & gas company to present a market and policy outlook at the AGM.

Workshop, 3 April

C. Björkqvist explained that the Workshop would discuss the Project Board's proposed set up of the role of ETN's Technical Committees (TC) in line with the newly produced R&D report. It would also allow participants to get an overview and learn more on ongoing and future initiatives. The Board recommended allowing a 15-minute presentation and 5-minute Q&A on each on-going project. The Board decided not to divide the Workshop into two parallel sessions as this would allow ETN members to review all on-going projects and initiatives in order to decide which initiatives they would be interested in. Dedicated meetings for each TC and on-going projects could be organised in the ETN office in the month following the Workshop.

C. Björkqvist also informed the Board on the current proposals that could be submitted under the new Research and Innovation funding programme, Horizon 2020. As of today, the following initiatives have been proposed and would be discussed further at the Workshop:

- Supercritical CO₂ quickly ready gas turbine cycles
Lead: Eugenio Giacomazzi, Enea
Deadline to apply: 1 April 2014
- Advanced biofuel CHP systems using micro gas turbines technology
Lead: Naser Sayma, City University London
Deadline to apply: 1 April 2014
- Hybridisation CSP for gas turbines (former HYCOSOL)
Lead: James Spelling, IMDEA
Deadline to apply: 10 September 2014

C. Björkqvist added that teleconference calls have been scheduled at the end of February with GE oil and gas and Solar Turbines, which are the two OEM's that could potentially participate in the project.

- Flexible integration
Lead: Herwart Hönen, RWTH Aachen University
Deadline: 10 September 2014

C. Björkqvist explained that based on the interest of the utilities, they would be able to select the right OEM to invite for participation in this project. H. Hönen reported that the abstract had been sent to C. Goy, E.ON, Stefan Sigali, Enel and Jurgen Jacoby, Vattenfall. C. Goy mentioned that E.ON could be interested to participate and she would forward the abstract to the right representative. C. Björkqvist reported that he was trying to contact smaller companies like Enervie and Trianel but he had not been able to locate the right person yet.

Action: CG to send the project abstract on Flexible Integration to the right E.ON representative.

Update and review process of the Articles of Association (AoA) and Internal rules

C. Björkqvist informed the Board that Articles 1, 2 and 3 of the AoA cannot be modified without an authorisation of the King of Belgium (Royal Decree). Therefore, it was decided not to modify them in the AoA. The AoA have been translated into French since this is one of the official languages in Belgium and sent to the notary for review. The ETN office would circulate the document reviewed by the notary to the Board and then to the General Assembly before the AGM. Once the AoA would be agreed by the General Assembly, the notary would register in the Moniteur Belge the Board of Directors, change the ETN address and register the changes to the AoA.

Action: CB to circulate to the Board the AoA reviewed by the notary.

Action: CB to circulate the proposed changes to the AoA to ETN members before the AGM.

6. ETN finances 2013 and budget 2014

H. Hönen presented the current state of ETN finances and explained that we have surplus results for 2013 which would allow us to transfer some amount to the reserves. The final numbers for 2013 and the prediction for 2014-2015 would be identified once we receive the final numbers from the accountant. When this would be finalised, H. Hönen would circulate the figures for 2014 to the Board, the outlook for 2015 as well as the number to be added to the reserves.

With regards to the agreement to spread ETN's reserves into several banks (max 100.000 EUR is guaranteed by each bank), C. Björkqvist reported that he had requested offers from four non related banks and is waiting for their answers.

On the finances for 2014-2015, C. Björkqvist stated that it would be important to deliver good proposals in the Horizon 2020 programme to replace the H₂-IGCC project, which is coming to an end in May 2014. He also proposed organising more courses outside Europe in the future in order to attract potential Affiliated members.

Action: HH to send to the Board the figures for 2014, the outlook for 2015 as well as the number to be added to the reserves when the final numbers are available.

Action: CB to spread ETN reserves into different banks.

7. High Level User Meeting (HLUM) and dinner debate:

The Board agreed that the last HLUM and dinner debate was a success but that we should renew the set-up for this year's meeting. For the dinner debate, it was suggested to address the future of the gas turbine industry as well as the future of oil and gas. It would be important to reiterate that currently, energy generators do not make profit and if there is no gas turbine back-up, there is no energy generated. The Board agreed that the HLUM would be a good opportunity to discuss this situation with the European Commission and European Parliament and also to hear their views of what is being done to address these issues. They suggested inviting high level people from user companies as well as technical representatives, especially among the utilities.

Action: CB to circulate the agenda of the HLUM and dinner debate and a list of potential people to invite.

8. Emeritus Club

C. Björkqvist informed the Board that we should start to put together a list of potential candidate that the ETN office could invite. He invited the Board to provide the names of any new valuable person that could be interested to become a member of the Emeritus Club. Potential candidates would be gas turbine specialists that retired but would like to be involved in ETN activities.

9. Closing of the Board meeting

B. Quoix closed the Board meeting.

ACTION LIST

No	New Actions	Resp.	Date
1	BQ to send the contact details of Dominique Louveton (Wamar, France) to the ETN office.	BQ	April 2014
2	UK to send the contact details of Nabil Barakat to the ETN office.	UK	April 2014
3	CB to send an email to Nabil Barakat, copying Dominique Louveton and UK.	CB	April 2014
4	BQ to send contact details of Thierry Toupin and Barbara Stanley to the ETN office.	BQ	April 2014
5	CB to send a formal invitation to Thierry Toupin and Barbara Stanley.	CB	April 2014
6	CB to circulate the draft programme of the IGTC-14 to the Board.	CB	March 2014
7	BQ to send an email to Luca Maria Graci from GE with regards to the dinner sponsorship.	BQ	April 2014
8	CB to set-up a meeting with GL to discuss the questionnaire.	CB/CL	March 2014
9	CB to circulate a draft version of the questionnaire to the Board.	CB	March 2014
10	CB to localise a high level speaker from an oil & gas company to present a market and policy outlook at the AGM.	CB	March 2014
11	CG to send the project abstract on Flexible Integration to the right E.ON representative.	CG	April
12	CB to circulate to the Board the AoA reviewed by the notary.	CB	March 2014
13	CB to circulate the proposed changes to the AoA to ETN members before the AGM.	CB	March 2014
14	HH to send to the Board the figures for 2014, the outlook for 2015 as well as the number to be added to the reserves when the final numbers are available.	HH	March 2014
15	CB to spread ETN reserves into different banks.	CB	April 2014
16	CB to circulate the agenda of the HLUM and dinner debate and a list of potential people to invite.	CB	April 2014

ANNEX

STATUS OF ACTION LIST (from MoM December 2013 Board meeting)

No	Actions	Outcome / Next action	Resp.
1	CB to discuss the possibility for the user community to comment the agenda with the filtration companies.	Done	CB
2	CG to coordinate the presentation with Laborelec.	Done	CG
3	BQ to invite BP to the Workshop and to follow-up on the membership discussion.	On-going. CB reported that he and BQ met with BP representatives at the GE annual event in Florence. BQ will follow-up with Chris Jenner, Rotating Equipment TA.	BQ
4	CB to follow-up with the debt collector and inform BQ if the company can't collect the fee for Wamar so he could follow-up on this with Nabil Barakat.	Pending. UK to send the contact details of Nabil Barakat in order for CB to follow-up. BQ to send Dominique Louveton's (wamar France) contact details to CB and copy him to the email.	UK/BQ CB
5	CB to verify if we can implement a function on our website that enables us to see how many people visit the pages of IGTC 2008 and 2010.	Done ETN has set-up a Google Analytics account.	CB
6	CB to discuss CL's comment with the Project Board at the upcoming meeting in January 2014.	Done CL's comments were discussed at the Project Board in January 2014. The Project Board will see how they can adapt the R&D Recommendation Report.	CB
7	UK and GL to create a questionnaire template to be circulated to ETN's user community.	On-going	UK/GL
8	ETN office to circulate the questionnaire to the user community and collect the replies.	On-going	CB
9	CB to prepare a presentation for the AGM explaining and justifying the reasoning and opportunities to open-up ETN to GT users outside Europe.	On-going	CB
10	CB to contact Yrjo Komokallio, GTUsers to discuss partnership opportunities.	On-going. CB reported that he would contact Yrjo Komokallio in March 2014.	CB
10	CB to modify the Articles of Association, in line with the Board's suggestions and circulate the document to the Board ahead of the next Board meeting.	Done CB reported that the AoA have been modified with the Board's suggestions, translated into French and send to ETN's notary for approval.	CB
11	Board members to finalise the proposed changes on the Articles of Association.	Deleted	Board
12	CB to submit the Articles of Association to Belgium lawyer/notary.	Done	CB
13	BQ to invite contacts in Brazil and Middle East to speak at the IGTC-2014 under <i>Keynote Session 3: Opportunities in Regional Markets</i> .	On-going. It was decided by the Board to invite a representative from Petrobras (Brazil) and have a representative from Qatar as an alternative speaker but invite both as participants.	BQ
14	BQ to provide the name and contact information of the representative from Siemens Energy and Solar Turbine with	On-going.	BQ

	regards to <i>Keynote Session 4: OEM Panel Discussion</i> .		
15	CB to discuss the Board suggestions with the CAB in January 2014.	Done	CB

PENDING ACTION LIST (from MoM March 2013 Board meeting)

No	Actions	Outcome / Next action	Resp.
1	AW to follow-up with TransCanada, Shanahan and Rolls Wood Group.	On-going. AW will follow-up in April after the first 2014 quarter.	AW
2	CB to organise separate meetings with GE, Alstom, Ansaldo, MAN, Rolls-Royce Solar and Siemens to discuss potential R&D cooperation.	On-going. CB met with Franco Rosatelli (Ansaldo) and will talk to Phil Walsh (Rolls Rolls) since they expressed interest in the hybridisation call.	CB
3	BQ to provide ETN with contact information for BP (US and Europe).	Pending. BQ tried to invite them for the AGM in Paris and will send them another email, copying GL, who is also in contact with them.	BQ
4	RR to contact the new contact person at Gasunie about membership.	On-going. RR reported that he called twice but nothing. CB will send a new contact name to RR.	CB/RR
5	CL to contact RWE about membership.	Pending. CL was in contact with RWE but reported that the timing is not right. CL will follow-up at a later stage.	CL
6	CL to contact Mitsubishi about membership.	Pending. Mitsubishi Power System will merge with Hitachi Power System in 2014 for the GT department. CL will contact them when the merge is finalised.	CL
7	UK to follow up with GKN for membership in a meeting set to take place at the end of December 2013	On-going. UK reported that he met with GKN in December 2013 and would send a follow-up email with more information on membership. CB suggested sending UK an email template, which he will be able to add a personal note.	UK/CB
8	ETN membership discussion at Scottish & Southern Energy.	On-going. CB met with the person from Scottish & Southern Energy in Brussels and will follow-up with her.	CB
9	UK to meet with Bo Pedersen of Maersk to discuss ETN membership.	Pending.	UK