

MINUTES OF THE BOARD MEETING

LONDON, UK, 10 OCTOBER 2013

Present:

Bernard Quoix, President (BQ)	TOTAL
Catherine Goy, Vice President (CG)	E.ON UK
Herwart Hönen, Treasurer (HH)	RWTH Aachen
Andy Williams (AW)	Wood Group
Giovanni Cerri (GC)	University Roma TRE
Chris Lappee (CL)	Vattenfall
Christer Björkqvist (CB)	ETN
André Mom (AM)	President Emeritus
Dominique Cornut (DC)	ETN
John Witton (JW) invited	Cranfield University

Apologies:

Uwe Kaltwasser (UK)	MTU
Gary Lock (GL)	Frazer Nash Consultancy
Pericles Pilidis (PP)	Cranfield University
Robert Rijdsdijk (RR)	Shell

Content:

1. Welcome
2. Review and approval of the MoM Brussels, Belgium, June 2013
3. Future ETN Strategy - review of the report on member categories expectations (annex to be attached to the June Board meeting minutes)
4. Review and report of Action List from the MoM Brussels, Belgium, June 2013
5. Review of ETN Activities Update
6. Review of ETN Workshop: Feedback and follow-up on important actions
7. ETN Emeritus Club
8. ETN potential members – Users
9. Upcoming Board meetings and events
10. Closing of the Board Meeting

Annex: Review of Action list from previous Board meetings (from April 2012)

1. Welcome

B. Quoix opened the meeting and welcomed the Board members. U. Kaltwasser, G. Lock, P. Pilidis and R. Rijsdijk sent their apologies for not being able to join the Board meeting.

2. Review and Approval of the MoM Brussels, Belgium, June 2013

The Board unanimously approved the June 2013 Board meeting minutes.

3. Future ETN Strategy - review of the report on member categories expectations

The Board unanimously approved the annex attached to the June Board meeting minutes. The purpose of this exercise was to provide input to the 5-10-year vision roadmap which C. Björkqvist plans to present to the Board at the December board meeting.

C. Björkqvist briefly revealed his intention to come-up with a proposal to open membership under new category to companies outside Europe. He justified this by saying that he believed ETN is ready to take this step and it would enable ETN to ensure continuous growth. As the market is becoming more and more global it is important that ETN follows its members' interest as well as market the unique knowledge that exists in Europe. C. Björkqvist explained that he believed an external membership network would provide many benefits for European Members as it would provide wider exposure for their products and knowledge. Having an external network could also provide further funding opportunities, both from organisations outside Europe than from the increase in membership income. The Board members welcomed the idea and reiterated that ETN would need to change the Statutes of ETN as they currently only allow two membership categories ("*Associate member*" and "*Full member*"). ETN would then have 3 categories: "*Associate members*" (OEMs), "*Out of Europe members*" and "*Full members*". A. Williams also suggested to extend the category of "*Associate members*" to other type of organisations such as governments. C. Björkqvist stated that he would look into the current Articles of Associations and propose a revised version that would be presented to the Board members at the next Board meeting.

The IGTC-14 could be a good opportunity to bring-in non-European members. In order to increase the visibility of our biennial conference, B. Quoix suggested making previous IGTC proceedings available to the general public on the ETN website. The Board agreed to this suggestion but not for the last conference (IGTC-2012) as these proceedings are available to be purchased.

Action: CB to present a more detailed enlargement strategy plan and provide the Board with a proposed updated version of the Articles of Associations at the December board meeting.

Action: CB to make the 2008 and 2010 IGTC proceedings available on the ETN website.

4. Review of Action List from the MoM Brussels, Belgium, June 2013

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

Action 1: Potential members (TransCanada, Shanahan)

B. Quoix reported that he has provided the contact information of TransCanada Turbines representatives to A. Williams. A. Williams explained that he contacted Shanahan, which is part of Wood Group, therefore the final decision would go through Wood Group. He informed

the Board that he still needs to clarify their position further and that the dialogue on this topic is still on-going.

A. Williams also informed the Board that Wood Group and Siemens AG have entered into an agreement to form a joint venture consisting of Wood Group GTS (excluding its Rolls Wood Group, TransCanada Turbines and Sulzer Wood joint ventures) who would be the majority shareholder and Siemens TurboCare business unit ("TurboCare"). As a result he mentioned that TransCanada Turbines and Rolls Wood Group could both be distinctive ETN members and that he will not follow-up with TurboCare anymore as they will be part of Wood Group.

C. Björkqvist stated that rules for joint ventures/merges should be mentioned in the Articles of Association (AoA). B. Quoix added that it is important to know who owns the company in order to know who can become an ETN member. A. Mom stated that when there is a merge between two companies, they both become one single ETN member. However there are exceptions such as Ansaldo and Alsaldo Thomassen which are 2 distinct ETN members. This is due to their own decision although they could have been one single member. It has been decided that Joint venture should have its own right in the updated AoA.

Action: AW to follow-up with TransCanada and Shanahan.

Action: AW will follow-up with Rolls Wood Group.

Action: CB to propose updates to the Articles of Association.

Actions 2-3: User community and Emeritus Club

These actions have been covered under item 7 and 8 in the agenda.

Action 4: IMechE

This action relates to the non-present board member Garry Lock.

Action 5: EVI-GTI (European Virtual Institute for Gas Turbine Instrumentation)

C. Björkqvist reported that he had provided all necessary information to the EVI-GTI Board about ETN and that they are open to collaboration on case by case.

Action 6 - Contact Markus Tacke, Siemens

B. Quoix reported that Markus Tacke has changed position within Siemens and is now in the wind section. B. Quoix will send the contact details of Markus Tacke's replacement to the ETN office. It was agreed that B. Quoix and C. Björkqvist would contact his replacement in a joint effort and highlight research cooperation opportunities, the upcoming IGTC-14 as well as sponsorship opportunities.

As the joint proposal with EUTurbines on a Private-Public Partnership (PPP) to the European commission (EC) did not turn-out to be successful, C. Björkqvist suggested to approach the rest of the OEMs individually to discuss potential cooperation under Horizon 2020, which the board believed was a good idea.

Action: BQ to send the contact details of Markus Tacke's replacement to the ETN office and contact him in a joint effort with CB.

Action: CB to organise separate meetings with GE, Alstom, Ansaldo, MAN, Rolls-Royce Solar and Siemens to discuss potential R&D cooperation.

5. Review of ETN Activities Update

The Board took note of the ETN Activities Update, which was circulated ahead of the meeting. The following point was discussed further:

With regards to Karen Geris' replacement, C. Björkqvist mentioned that the ETN office needs a Technical Project Manager with a wide knowledge and experience. An additional Event Management and Communication officer would also be needed to complement the team. C. Björkqvist welcomed any recommendations from the Board members for potential candidates for the Technical Project Manager position.

A. Williams also requested C. Björkqvist to notify the Board by email when there is a change of personnel in the ETN office.

6. ETN Workshop Review: feedback and follow-up on important actions

The Board members expressed their satisfaction with the outcome and overall organisation of the October Workshop.

C. Björkqvist mentioned that in the past, he has received some criticism that the same topics were repeated in the workshops' agenda without any substantial progress. He explained that the steps to address this have been to increase the flow of ideas into the Technical Committees and to ensure that the right people are present by combining TCs 1-2 and TCs 3-4-5. The establishment of a Project Board that are individually assigned to monitor the progress on different initiatives will also hopefully help. Another proposal that resulted from the Project Board was to appoint co-Chairmen from the industry that would be more result oriented.

In order to avoid too long presentations at the Workshop, the Board members suggested the ETN office to supervise the length of the presentations with the speakers before the Workshop.

7. ETN Emeritus Club

C. Björkqvist explained to the Board the purpose of the Emeritus Club, presented the rules of participation and explained the importance of having short term experts in the network. The Board positively welcomed the proposal. B. Quoix mentioned that potential candidates will have to apply by sending their CV to the ETN office and their application will be subject to the Board's approval. A. Williams added that a mechanism should be put in place in order to delete the non-active/non-performing member after a few years. C. Björkqvist suggested having one review every two years to see how the members of the Emeritus Club perform and what they have accomplished. The ETN office would add the contact details of the Emeritus Club members on the ETN website along with their CV and area of expertise.

John Witton suggested to define further the definition of five days of work to be performed by the Emeritus Club members and agreed that two years would be a suitable time to do a performance validation. C. Goy mentioned it would be good to provide them with ETN's expectations for a day of work in order to let them know what is expected from them (guidelines). The Board decided that the ETN office would judge if the work performed has been valuable.

Action: CB to modify the Emeritus Club proposal with the Board suggestions and circulate it to the Board for approval before the official launch.

8. ETN potential members – Users

C. Björkqvist stated that based on a decision at the last board meeting that it would be more effective if individual Board members circulated invitations to potential members from the user community, the ETN office had sent an invitation letter and a list of potential members from the user community to the Board. C. Goy commented that some of the Board members had been assigned to contact persons that they did not know. C. Björkqvist replied that this was only a suggestion as we had received very few input from the Board members. A. Williams stated that he would feel more comfortable to contact users that he knows personally.

B. Quoix reported that he contacted BP which replied that they would be interested to become a member. C. Björkqvist mentioned that it was actually good that the AGM would take place in Total as this would provide a good opportunity to bring in additional oil & gas users.

It was mentioned that ETN should try to get a new contact for RWE Power AG as the current one (Bruno Schroeder) decided not to become an ETN member last time he was contacted. C. Lappee reported that he knows a representative at RWE that he could contact.

Concerning the Italian based Cofely, G. Cerri met with representatives several times in the past but they haven't decided to become a member yet. As for ENI and ENI Power, G. Cerri mentioned that he contacted them but hasn't received any positive answer. B. Quoix and C. Björkqvist reported that they also had discussed membership with them without any success. A. Mom reported that he has new names for Gasunie that he would send to the ETN office. It was agreed that it would be best if R. Rijdsdijk would contact them.

B. Quoix inquired if ETN had ever tried to bring in Mitsubishi since they have an office in London. C. Lappee reported that he had contacts at Mitsubishi that he could discuss membership with them.

A. Williams suggested asking Yrjo Komokallio if he could supply suitable user names that the ETN office could contact.

Action: Board members to provide new names (if any) to the contact list of potential members (users).

Action: BQ to provide ETN with contact information for BP (US and Europe).

Action: AM to provide ETN with new contact information for Gasunie.

Action: RR to contact the new contact person at Gasunie about membership.

Action: CL to contact RWE about membership.

Action: CL to contact Mitsubishi about membership.

Action: CB to contact Yrjo Komokallio for new contact information.

9. Upcoming Board Meetings and events

Board Meetings

The Board suggested that two Board meetings per year should last longer (one day and half rather than two half days) in order to cover thoroughly the topics of the agenda. It was agreed that the June and December Board meetings would be the ones to last longer.

Date	Location
9 Dec (afternoon) - 10 Dec (all day) 2013	Brussels, Belgium
April 2014 (before or after the AGM and Workshop)	tbd
June 2014 (date tbd)	tbd
December 2014 (date tbd)	tbd

Action: The ETN office to circulate a Doodle for the April Board meeting.

Upcoming ETN meetings and events

Event	Date	Location
H ₂ -IGCC Consortium meeting	2-3 December 2013	Cranfield, UK (Cranfield University)
OMSoP Consortium meeting	16-17 December 2013	Brussels, Belgium (ETN office)
Annual General Meeting and Workshop	2-3 April 2014	Paris, France (Total)
H ₂ -IGCC Final meeting	13-14 May 2014	Brussels, Belgium (Laborelec)
7 th International Gas Turbine Conference	14-15 October 2014	Brussels, Belgium

15. Closing of the Board meeting

B. Quoix closed the Board meeting.

ACTION LIST

No	New Actions	Resp.	Date
1	CB to present a more detailed enlargement strategy plan and provide the Board with a proposed updated version of the Articles of Associations at the December board meeting.	CB	Before Dec Board meeting
2	CB to make the 2008 and 2010 IGTC proceedings available on the ETN website.	CB	Nov 2013
3	AW to follow-up with TransCanada and Shanahan.	AW	Before Dec Board meeting
4	AW will follow-up with Rolls Wood Group.	AW	Before Dec Board meeting
5	CB to propose updates to the Articles of Association.	CB	Before Dec Board meeting
6	BQ to send the contact details of Markus Tacke's replacement to the ETN office and contact him in a joint effort with CB.	BQ/CB	Before Dec Board meeting
7	CB to organise separate meetings with GE, Alstom, Ansaldo, MAN, Rolls-Royce Solar and Siemens to discuss potential R&D cooperation.	CB	
8	CB to modify the Emeritus Club proposal with the Board suggestions and circulate it to the Board for approval before the official launch.	CB	Before Dec Board meeting
9	Board members to provide new names (if any) to the contact list of potential members (users).	Board members	Before Dec Board meeting
10	BQ to provide ETN with contact information for BP (US and Europe).	BQ	Before Dec Board meeting
11	AM to provide ETN with new contact information for Gasunie.	AM	Before Dec Board meeting
12	RR to contact the new contact person at Gasunie about membership.	RR	
13	CL to contact RWE about membership.	CL	
14	CL to contact Mitsubishi about membership.	CL	
15	CB to contact Yrjo Komokallio for new contact information.	CB	
16	The ETN office to circulate a Doodle for the Board meetings to take place in 2014.	CB	Before Dec Board meeting

ANNEX 1

PENDING ACTION LIST (from MoM April 2012 Board meeting)

Actions	Outcome / Next action	Responsible
GL to follow up with IMechE.	<i>Pending.</i>	GL
CB should look into the possibility to have a LinkedIn group for ETN members.	<i>Pending.</i>	CB
UK to follow up with GKN for membership	<i>Pending.</i>	UK
CB and Board to prepare plan to approach EP and EC	<i>Pending.</i> CB to prepare a letter to the EU institutions.	CB – Dec 2013
CB to draft a MoU for cooperation with EUTurbines	<i>Deleted</i>	CB
ETN membership discussion with Ross Moffitt at Scottish & Southern Energy.	<i>Pending.</i> AW to provide the contact details of R. Moffitt	AW/CB - Dec 2013
BQ to contact Frits De Jong of Turbocare about ETN membership.	<i>Deleted</i>	BQ
UK to meet with Bo Pedersen of Maersk to discuss ETN membership.	<i>Pending.</i> UK to follow-up.	UK
BQ to contact BP representatives in Houston, US.	<i>Deleted</i>	BQ
CB to distribute the list of external contacts to Board for approval.	<i>Done</i>	CB