Date: 28 March 2022
Time: 1400 Hrs – 1700 Hrs Athens LT
Location: Athens, Greece – Divani Apollon Palace & Thalasso – Poseidon A Meeting Room
Contents

1. Meeting Administration
2. ESC Activities
3. Any Other Business
4. Review and Meeting Close
1.1 List of Participants

<table>
<thead>
<tr>
<th>Sub Committee Members</th>
<th>Organisation</th>
</tr>
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<tbody>
<tr>
<td>John Boreman (SC Chair)</td>
<td>BP</td>
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<tr>
<td>Geoff Allsobrook</td>
<td>Chevron</td>
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<tr>
<td>Guy Nicholls</td>
<td>Cheniere</td>
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<tr>
<td>Ruben Sanjuan Lopez</td>
<td>Enagas</td>
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<td>Anurag Wadhwa</td>
<td>ExxonMobil</td>
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<td>Eleni Lazaratou</td>
<td>Maran Gas</td>
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<tr>
<td>Stephen Brown</td>
<td>Shell</td>
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<td>Michel Faou</td>
<td>TotalEnergies</td>
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**SIGTTO Secretariat**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tr>
<td>Rob Farmer (Secretary)</td>
<td>Principal Technical Adviser</td>
</tr>
<tr>
<td>Chris Clucas</td>
<td>General Manager</td>
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<tr>
<td>Cherian Oommen</td>
<td>Senior Technical Adviser</td>
</tr>
<tr>
<td>Ian Harrison</td>
<td>IMO Representative</td>
</tr>
<tr>
<td>Laura Else</td>
<td>Technical Publishing Manager</td>
</tr>
<tr>
<td>Mariah Abshire</td>
<td>Technical Publishing Assistant</td>
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1.2 Meeting Opening

1.2.1 Chair’s opening

John Boreman (JB), the ESC Chair, opened the meeting and welcomed all attendees. JB provided an outline of the agenda.

1.2.2 Guidance for meetings and facilities

The ESC Secretary Rob Farmer (RF) reminded attendees of their obligation to comply with SIGTTO Anti-Competition and Anti-Trust guidance.

A member of the Divani Apollon Palace & Thalasso Hotel staff briefed attendees on safety procedures for the venue.

1 SC 03 - 09
1.2.3 Introductions and apologies
JB welcomed all attendees, which were as per the list of participants. He welcomed those joining the meeting through Microsoft Teams and invited everyone to introduce themselves.

1.2.4 Approval of minutes
The minutes of ESC06 were distributed prior to the meeting and no comments were received. The ESC approved the minutes with no changes.

Part 2 – ESC Activities

2.1 Working Group Updates

2.1.1 Gas Carrier CO₂ Emissions
Ian Harrison (IH) reported that the working group has made good progress and the draft publication will be submitted to the GPC for approval.

Guy Nicholls (GN) and Eleni Lazaratou provided some comments on the document. Ian thanked them for the comments, which will be incorporated.

2.1.2 LNGC Fugitive Methane Emissions
IH reported that this working group made good progress and the draft publication will be submitted to the GPC for approval. IH clarified the definition of fugitive emissions, which had limited the scope of the document. The next working group will look at all methane emissions, not just fugitive emissions.

2.1.3 Reduction of Gas Carrier CO₂ Emissions
RF reported that this working group had its kick-off meeting on 9 March 2022. The proposal for the chair will be submitted to the GPC for approval.

2.1.3 Reduction of LNGC Methane Emissions
RF reported that this working group had its kick-off meeting on 1 March 2022. This WG’s TOR was revised to include all methane emissions rather than just fugitive. The updated TOR and proposal for the Chair will be submitted to the GPC for approval.

2.2 IMO Update
IH provided an update on developments at the IMO since the last ESC meeting. He summarised the discussions of ISWG – GHG 11 and the upcoming highlights of ISWG – GHG 12 and MEPC 78.

IH will circulate the proposals being discussed on CII correction factors.

Action: Secretariat to circulate correction factor proposals to ESC.
Part 3 – Any Other Business

3.1 AOB

3.1.1 GIIGNL MRV and GHG Neutral LNG Framework

GN led a good discussion on these documents, which are to be used as references for the Reduction WGs.

3.1.2 UNECE Proposal for Methane Regulation

RF reported that the EU is working on the Methane Strategy document and at the end of 2021 the European Commission issued the proposal to be finalised in Q2 2022.

3.1.3 Ammonia as Fuel

RF referred the ESC to the Use of LNG, LPG, and Ammonia as Fuel WG’s TOR, which was provided for information. This work programme has just started and is in conjunction with the IMO IGC Code revision. Stephen Brown highlighted the need for safety guidance on the use of ammonia.

3.1.4 CII Case Studies

GN introduced the topic of potentially developing CII case studies for various ship types. A good discussion was held on what would be possible and any potential benefits. RF asked to clarify if the focus would be to highlight how CII rating would be affected with application of technologies and operation versus generating generic CII information. ESC agreed and will be asked to provide more information during ESC 08 to develop.

Action: ESC members to provide information on this topic.

3.1.5 Onshore Power Supply

RF opened the topic and mentioned that current work at IMO on this subject, which was going to be discussed during MSC 103, has been delayed until MSC 107. There was good discussion on this topic and consensus from ESC members regarding the current maturity of this technology. Further discussions brought up the initial list of issues proposed for the ESC to consider. ESC agreed to review the ESC project list and add this topic in principle.

Action: Secretariat to circulate initial project list for review and amended.

3.1.6 Environmental Subcommittee

There was a good discussion on whether the ESC should remain as a subcommittee or become a standalone committee. It was agreed that the ESC will propose to become a standalone committee.

RF agreed to circulate the ESC’s original TOR and asked for attendees to submit their proposal and list of goals for the committee.

Action: Inform GPC of plan to become a standalone committee and present proposal to the Board.
Part 4 – Review and Meeting Close

4.1 Future Dates

RF explained that the next ESC meeting will be held in conjunction with GPC 85 meeting on 4 October.

4.2 Chair’s Summary

JB summarised the points discussed and agreed action items:

1. Secretariat to circulate the correction factors proposals
2. ESC members to provide information on CII Case Studies
3. Secretariat to circulate initial project list for review to consider onshore power supply project
4. Secretariat to circulate the ESC’s TOR
5. ESC members to submit their list of goals for the subcommittee to the Secretariat
6. Proposal to make Environmental Subcommittee a standalone committee to be presented to the Board of Directors and GPC to be informed
7. Next ESC meeting to align with GPC 85 in London.

There being no further business, the meeting was closed, and the attendees thanked for their participation.