**Decentralised energy Systems**

**Working Group launch meetings**

Minutes of the meeting

26th April 2022, Online (Teams)

**List of the** **members**

|  |  |  |
| --- | --- | --- |
| First name | Last name | Organisation |
| Participants on 26th April meeting |
| Enrico | Bianchi | Ansaldo Energy Green Tech |
| Giovanni  | Bianco | Ansaldo Energy Green Tech |
| Paolo | Del Turco | Baker Hughes |
| Peter | Kutne | DLR |
| Martina | Hohloch | DLR |
| Christer  | Björkqvist | ETN |
| Simon | Gianordoli | ETN |
| Rene | Vijgen | ETN |
| Axel | Hebert | InfoSys |
| Magnus | Genrup | Lund University |
| Peter | Breuhaus | NORCE |
| Mohammad | Mansouri | NORCE |
| Katarina | Svabcikova | Siemens Energy |
| Enrico  | Mauri | Solar Turbines |
| Hamidreza | Gohari Darabkhani | Staffordshire University |
| Francesco | Rovense | Universidad Rey Juan Carlos |
| Giuseppe | Tilocca | University of Sevilla |
| Muhammad  | Baqir Hashmi | University of Stavanger |

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**DES WG meeting (26th April 2022, 15.00-16.30 CEST)**

Peter Breuhaus (NORCE) opens the online meeting and welcome participants. He gives the floor to Simon Gianordoli (ETN).

Simon Gianordoli (ETN) presents the agenda of the meeting as follow:

1. Welcome and introduction of the Chairs
2. Take-aways from the ETN AGM for DES WG
3. Proposal for a WG publication
4. Any other business - All

**Welcome and introduction of the Chairs**

Peter Breuhaus (NORCE) welcomes the participants.

**Take-aways from the ETN AGM for DES WG**

Peter Breuhaus (NORCE) presents key take aways from the ETN Annual General Meeting where Decentralised Energy Systems activities were discussed during the Workshop session:

1. Clearly identify a application / nice in which GTs are having a competitive advantage compared to the ICEs.
2. Reduce the costs of GTs towards the range of ICEs
3. Integrability with other and specifically renewable energy sources as well energy storage technologies is a key
4. Ensure a hight level of reliability and robustness of the systems combined with a high level of flexibility towards used fuels (e.g. coconut oil as fuel in Africa), changes in operational profiles and decoupling of heat and power generation.

It is here about finding the best application for gas turbines technologies in niche markets.

Enrico Bianchi (Ansaldo) and Giovanni Bianco (Ansaldo) indicated that they went through references and case studies and that they found the complete database of CHP fleets installed in the United States. Considering the high number of applications, it can be an interesting base to review with data analysis and to look after more data for Europe.

After discussions, Members agree that traditional applications (heat/power) should be reviewed to identify the most interesting ones and especially the industrial applications which support other processes (multi-generator units). The WG agrees to start collecting different applications in those two categories where integrability with others components and cost reduction would be combined. On the costs reduction, as it is difficult to achieve, Mohammad Mansouri (NORCE) volunteers to propose a document related to CAPEX costs in the MS Teams repository.

**Proposal for a WG publication**

Simon Gianordoli (ETN) proposes to the Members to concretise the WG activities by producing a publication. A first part (I) would be dedicated to DES state-of-the-art and would be general. A second part (II) would review the collected applications from a technical and/or business perspective and would constitute the core of the report. One of the objectives is to be end-user oriented. A third part (III) would be a conclusive and recommendations part. The Members agree on this publication. It will be an ETN internal document for the Members.

It is proposed to approach the Young Engineers Committee to know if they would provide support in Part 1.

The Chairs and Members will support the activities in Part 2 insofar by bringing applications for the next meeting and start working on those. Support form Antonio Escamilla that will join ETN office for 3 months may be asked.

The next meeting would be either at **ASME conference** (in-person) or **online on 21st or 28th of June 2022**. Simon Gianordoli (ETN) ensure the follow-up.

A precise timeline should be proposed for the production of this report.

**Any other business**

No other business. Peter Breuhaus (NORCE) thanks the participants and close the meeting.

**Actions list:**

| # | New Actions | Resp. | Deadline |
| --- | --- | --- | --- |
| **1****2****3****4** | Collect and reviews applicationsInputs from the Members Liaise with YEC on Part 1Organise next meeting | ChairsAllETNETN | Next meetingNext meetingNext meetingAsap |