**CAETS Energy committee 2022**

**Meeting nº1 - 17 February 2021**

**Participants (8 a.m. UTC meeting)**

Eloy Alvarez Pelegry, Attila Aszódi, Yves Bamberger (President), Boris Bourdoncle, Jaime Dominguez Abascal, Neven Duic, Jianbin Fan, Lennart Fredenberg, Wolf Gehrisch, Hao Hu, Chinho Park, Hongtao Ren, Ulrich Wagner, Diana Xu,

**Partipants (4 p.m. UTC meeting)**

José Francisco Albarrán Núñez, Eloy Alvarez Pelegry, Yves Bamberger (President), Boris Bourdoncle, Pradeep Chaturvedi, Bob Evans, Al Romig, Manuel Solanet, Masakazu Sugiyama, Wikus Van Niekerk, Oscar Vignart

The meeting was held twice to facilitate the participation of members from different time zones.

**Introduction**

After realising that the previous CAETS Energy Committee reports were mostly focused on the supply side, Yves Bamberger decided to suggest working on the demand side, and more specifically on end-uses decarbonisation. That implies not only discussing technology but also regulations and economics. Y. Bamberger proposes two actions: a questionnaire could be sent to all Academies to conduct national surveys ; additionally, a few thematic (Buildings, some industries) issues could be studied in dedicated working subgroups.

The participants are invited to express their opinion on the subject, on the subjects they could especially contribute and the work method.

**Ulrich Wagner**

U. Wagner thinks that working on the demand side is relevant because demand is at the beginning of the energy process. The first aim of the Committee should be to obtain accurate data in order to determine energy balances in all economic sectors. That will be essential to understand the current trends. Doing so will not be easy, but it will be an important added value of the report. U. Wagner is willing to help with the questionnaire.

**Chinho Park**

C. Park mentions that the previous Committee briefly discussed the demand side two years ago, but only gave a qualitative statement as collecting data about the demand was difficult. In that regard, the questionnaire will be essential and needs to be well designed. The questionnaire is also a key element in achieving a high participation rate from the Academies.

**Lennart Fredenberg**

According to L. Fredenberg, the choice of topic is good, but the Committee will have to limit the scope of the report. Starting with energy balances is a good idea. The IEA might have national data that would constitute a good starting point. Concerning studying a few specific sectors, L. Fredenberg suggests studying buildings and the industry, because they vary significantly from one country to another. Decarbonisation through electrification is a dynamic topic in the industry; decarbonisation of energy uses in buildings is also very active.

**Hao Hu**

Has Hu represents Yinbiao Shu together with Jianbin Fan. He agrees with the proposed subject and is willing to help with the questionnaire and the data collection.

**Neven Duic**

N. Duic sees electrification of heating and transport as two very important trends for the next decade. Building retrofit will also play an important role in the transformation of the energy sector. N. Duic however warns that working only on the demand side without looking into the integration in the energy system will be difficult, especially with regards to the intermittency problem of renewable sources.

**Eloy Alvarez Pelegry**

E. Alvarez Pelegry believes that the topic is well chosen because it hasn’t been extensively studied, especially heating and cooling of buildings and industry decarbonisation. He believes that the Committee should focus on engineering and technology solutions, as it is a CAETS committee; economics and regulation will have to be taken into account but shouldn’t be central. He suggests to look not only at data but also at the roadmaps of the different countries for decarbonisation of end-uses. The time horizon could be 2030-2050.

**Jaime Dominguez Abascal**

J. Dominguez Abascal proposes to focus on buildings, the industry and mobility, and agrees that the Committee should also work on the national strategies for decarbonisation.

**Jianbin Fan**

J. Fan agrees that mobility, housing and industry could be the Committee’s focus points.

**Attila Aszódi**

A. Aszódi thinks that the topic is very relevant. He suggests collecting good practices and lessons learnt from specific implementations such as smart metering. He agrees that the questionnaire will be crucial.

**Diana Xu**

D. Xu attends the meeting as an observer. She helped coordinating the previous reports and could help with this one.

**Oscar Vignart**

O. Vignart believes that the topic is very important but also very complex. The Committee will need to carefully choose the scope and decide which industry sector should be studied.

**Wikus van Niekerk**

W. Van Niekerk thinks that focusing on the demand side has a lot of merit. It might not be too difficult if the Committee focuses on the domestic case, but it will become complicated if large industries are included.

**Bob Evans**

B. Evans thinks that emphasising the demand side is relevant. The electrification of mobility is a very important trend and could be one of the topics of the report.

**Masakazu Sugiyama**

For M. Sugiyama the objectives will have to be well defined: energy savings and decarbonisation should not be confused with each other. They are related but not completely dependent. Moreover, the Committee should take into account the fact that this report will be the first one after the pandemic. Studying end-uses related to home office, online conferences, data centers and the IT sector in general would be relevant.

**José Francisco Albarrán Núñez**

J. F. Albarrán Núñez finds the topic very interesting but warns that the diversity of national situations will be difficult to deal with.

**Pradeep Chaturvedi**

P. Chaturvedi mentions that India focuses on the supply as well as the demand side. The Indian National Academy of Engineering published a report on clean and green energy for urban development and studies the decarbonisation of large industrial manufacturing sectors like cement, steel, aluminium and petrochemicals. He thinks that the question of the costs must be a part of the report.

**Al Romig**

A. Romig thinks that working on end uses decarbonisation is good and novel. Buildings and the industry are good topics. However the approaches vary a lot from one region to another, and depends on geography, geology, meteorology… The Committee won’t be able to address all these situations. A catalogue of the national approaches by each Academy would constitute a very useful report.

**Additional comments and remarks**

The Committee will have to be clear in its objectives on the difference between decarbonisation and the reduction of energy consumption. The IEA data might be useful, especially in checking some of the data provided by the Academies, but it focuses on energy carriers, not on end-uses. The question of thesystemic integration is decisive but the Committee has a limited work capacity and should focus on a specific added value, which could be energy balances.

Concerning the questionnaire, a good balance between too global and too detailed will be essential to obtain accurate data from as many Academies as possible. The report could contain a nationally dependent part about energy balances and strategies for decarbonisation and an international part about technological solutions for decarbonisation. Industry decarbonisation is a good topic but should be limited to a few sectors. Some examples are: petrochemicals, steel, cement, aluminium, agricultural industries. A selection criterion could be that the sector should be present in several member countries of CAETS.

**Concluding remarks and work schedule**

Y. Bamberger will draft a first two-page version of the scoping paper. The scoping paper will help in designing a first version of the questionnaire. The scoping paper and the questionnaire will be first discussed with specific subgroups of volunteers, then will be circulated to all participants for comments.

The next meetings will take place on **3 and 4 May 2021** and **12 and 13 July 2021**. The meetings will be remote, with double sessions each day, **at 8 a.m. UTC and 4 p.m. UTC**. The meetings will be recorded.

On 3 and 4 May, the scoping paper and the questionnaire will be discussed and validated. A part of the agenda will then be devoted to thematic presentations of end-use decarbonisation by volunteers.