

Agenda item 4.a.ii

# Mapping of emerging climate technologies

TEC/2020/21/5 Background note on emerging climate technologies

Technology Executive Committee, 21<sup>st</sup> meeting

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## Background

- **TEC 17 (September 2018)** considered a **background paper** on possible work of the TEC on the innovation of emerging climate technologies and agreed to consider undertaking further work on this issue at TEC 18, as part of its next rolling workplan.
- **Rolling workplan 2019-2020**, Area Innovation, Activity 2:
  - *To analyse key emerging climate technologies*
  - *To produce in 2020 a mapping of emerging technologies, including possible scope of TEC work on this matter*
- Work conducted by the **Task Force on Innovation**

## Concept note

1. Concept of key emerging climate technologies.
2. Mapping of key emerging climate technologies
3. Examples of analysis of emerging climate technologies produced by other organizations
4. Possible scope of the work of the TEC on this matter

## Concept of key emerging climate technologies

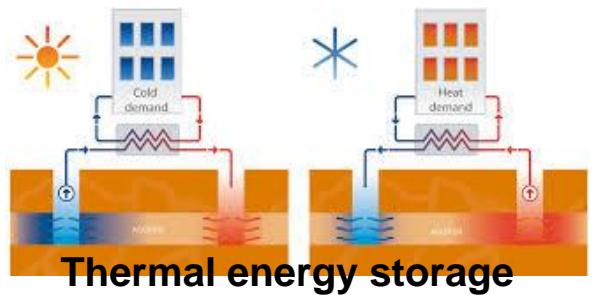
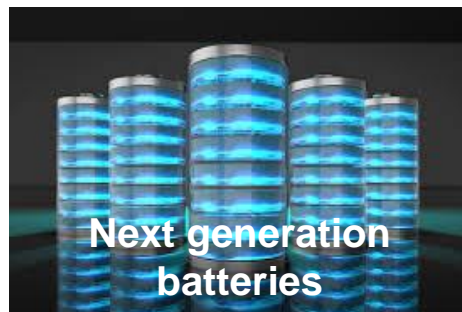
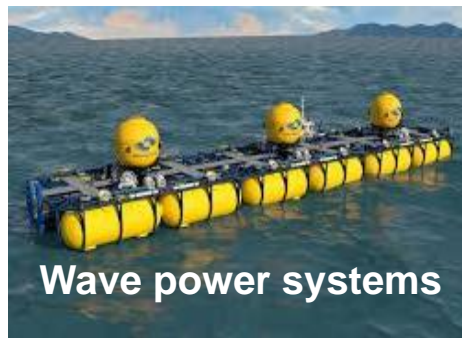
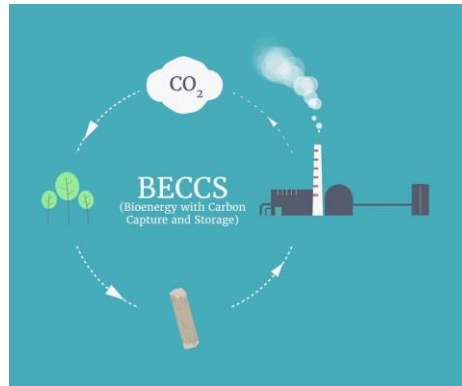
The World Economic Forum defines emerging technologies as:

- (a) *“Technologies which arise from new knowledge, or the innovative application of existing knowledge*
- (b) *“Those that lead to the rapid development of new capabilities*
- (c) *“Those that are projected to have significant systemic and long-lasting economic, social and political impacts*
- (d) *“Those that create new opportunities for and challenges to addressing global issues*
- (e) *“Technologies that have the potential to disrupt or create entire industries.”*

## Mapping of key emerging climate technologies

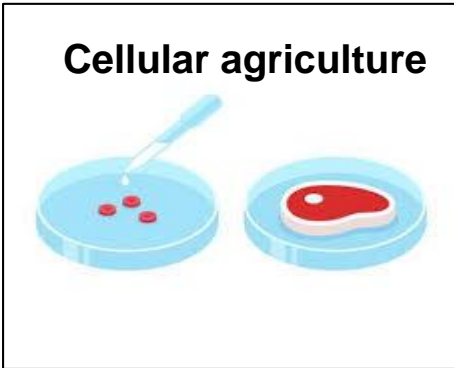
- A list of 16 emerging technologies in sectors with potential for climate change mitigation and adaptation (e.g. energy supply, transport and agriculture) or relevant to multiple sectors (.e.g carbon removal and digital technologies).
- Short description of each technology and basic information on:
  - The stage in the technology development cycle,
  - The potential use and impact for climate change mitigation and adaptation
  - Potential economic, social and political impacts

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## Examples of analysis of emerging climate technologies produced by other organizations

All key actors produce analysis and mapping of emerging technologies:

- United Nations organizations,
- Intergovernmental organizations,
- International organizations
- Academia and research institutes
- Private sectors



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## TEC consideration

- The TEC is invited to:
  - Consider the background note
  - Provide guidance on further follow-up action by the TEC on this matter

## Guiding questions for the TEC

1. Is the **concept of emerging climate technologies** sufficiently described? Or should the TEC continue this work by extending the investigation from desk review to stakeholder consultation?
2. Do the **mapped technologies** provide sufficient ground for further work of the TEC on this matter? Should the TEC expand the mapping to new technologies? Or should the TEC increase the level of information for all or a selected group of technologies
3. What are the **added values of the work of the TEC** activity in this area? What elements can be addressed by the TEC that have not been covered by other similar exercises? What kind of product(s) does the TEC consider to be the most useful?

*Thank you!*



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