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# **IEA ETSAP Technology Collaboration Programme Annex XV Brainstorming**

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Chair IEA ETSAP TCP Executive Committee

*ETSAP Workshop June 7 2019*

*Title: Understanding and facilitating the energy transition to achieve the ‘well below 2° goal*

ETSAP will support research and development activities in order to advance the state-of-the art of energy systems analysis. A non-exhaustive list of topics includes:

1. Climate **mitigation** responding to the policy ambition aiming for “well below 2° C”;
2. Incorporating impacts of R&D in TIMES to capture the **role of innovation**;
3. Exploring the interplay between differences in **long term and short term** policy ambition;
4. Energy Technology Data Source (**E-TechDS**) updates;
5. Improved modelling of **variable renewables** and short term system operational issues in long term energy systems modelling;
6. New approaches for integrating **human behaviour** into energy systems modelling; and
7. Improved modelling of the interactions between the energy system and the **economy**

*Title: ??? Paris Stocktake ??*

A non-exhaustive list of topics includes:

1. Improving communicating and engagement – particular focus on policy makers and investors
2. Sustainable Development Goals – including modelling energy – land – food- nature nexus and just transition;
3. Incorporating social sciences into TIMES modelling – including behaviour, willingness to pay, gender and equity;
4. Opening TIMES – licensing, models, data and data interface
5. Improving methodologies – including demand side, uncertainty, circular economy, materials, increase resolution and role of R&D