

Notes from EKN's and SEK's Scientific Climate Council meeting, 10 May 2022

About EKN's and SEK's Scientific Climate Council

The Climate Council is an advisory expert body with the aim to guide the Swedish export finance system in its ambition to adapt their full operations to be in line with the Paris Agreement's 1.5°C target. The Climate Council is a knowledge resource and a discussion partner for EKN and SEK concerning principled positions.

The climate council meetings are held under Chatham House Rule. The purpose of the meeting notes is to reflect and summarize the Climate Council's primary take-home messages to EKN and SEK.

Participants 10 maj 2022 (physical meeting)

Climate Council: Anna Krook-Riekkola (via link), Max Åhman, Måns Nilsson, Tomas Kåberger

EKN: Anna-Karin Jatko, Peter Tuving, Karin Wessman

SEK: Magnus Montan, Maria Simonson, Jens Hedar

Topics for the Climate Council's third meeting

- **What could a realistic and credible transition plan in line with the Paris Agreement's 1.5°C target look like for already existing operations with high greenhouse gas emissions?**
 - For example: refineries and fossil-based powerplants wanting to reduce their climate impact.
- **What types of key projects are needed for climate transition, but that may be difficult to finance?**

In addition, the Climate Council also had a brief exchange on how Russia's war in the Ukraine and other geopolitical conflicts impact global energy investments.

Energy investments in the light of current geopolitical conflicts

Geopolitical tensions have put security issues in focus and will dominate and guide priorities and actions forward, both nationally and regionally, also in relation to climate policy.

- There is an increasing politicization regarding ownership matters and how trade is conducted, which will influence how states will make their investments. What role and significance will democracies have in supply chains going forward? "Made in democracy" – will that be a concept?
- With the new geopolitical patterns now taking shape the costs for fossil fuels will most likely remain high. In terms of security and energy policy, the complexity is increasing, but in terms of climate policy, this will be an important aspect in order to achieve the needed transition. New technical solutions are on their way such as for example hydrogen production at sea using wind-based power plants and transporting the hydrogen, instead of electricity, back to shore.

Access to strategic minerals, need of increased circularity and ensuring access to food are three other key areas with bearing on security policy and climate transition. **The transition has started, and investment needs are large**

- The Climate Council and EKN/SEK notes that Swedish companies – large, medium-sized and small – are in fact in the process of making transition plans as well as real investments to achieve transition of their businesses.
- At the same time, there are not that many investment cycles left until 2045. Therefore investments for transition must happen sooner rather than later and in all countries. At the same time, it is important to note that countries have different starting points and preconditions.

What could a realistic and credible transition plan in line with the Paris Agreement's 1.5°C target look like?

Demand an updated financial and technical alternative analysis – is the investment financially justifiable?

- The price today for coal, oil and gas makes new fossil-based investments hard to justify based on a strict financial calculation. As an example, the financial conditions are completely different today compared with 2018.
- With today's coal prices, it is relatively easy to question and challenge the economic rationale for using coal in electricity as well as in heat production, but also in other industrial processes such as steel, cement et cetera as costs for CO₂-emissions are increasing.
- The Climate Council therefore calls upon EKN/SEK to always demand an updated financial and technical alternatives analysis to assess if the investment is profitable over time.

Assess the activity to be financed, and its role in the relevant future system/systems.

- Many investments have a long lifespan. Therefore, one should not only look at the role and relevance of the investment in today's system, but one must also consider the place of the investment in the future system in order to make a correct assessment of whether an investment is rational today. This applies regardless of whether it is a new or existing business.
- Another aspect to consider is that the alternatives are for the suggested investment. What would the money be used for otherwise? This is a relevant question also for so-called "green" investments.
- In most cases, it is not possible to justify new investments in fossil-based electricity and energy production. These are long investment cycles which results in lock-in effects, which in turn undermine the possibilities to reach the 1.5-degree target and also risks the investment to become a "stranded assets".

All scenarios are not in line with the 1.5-degree target

- All businesses need to identify and chose scenarios for analysing needs for future development and how the business fit in different climate scenarios.
- Just because a scenario is developed using scientifically accepted models does not per se make it scientifically based.
- Climate science is based on global climate models and it therefore has limitations when it comes to deciding on allocation between countries and actors. Nor does the Paris Agreement say anything about the exact allocation, or the path to achieve various objectives. The Paris Agreement can therefore not be applied "top-down". Thus, "Paris-aligned" is not a particularly useful concept for individual companies.
- Strategies to achieve net-zero-scenarios need to be based on absolute reductions. The Climate Council strongly advices against using climate compensation as a strategy to achieve net-zero-targets.

Natural gas should not be seen as a transition fuel

- Under certain conditions however, natural gas-based back-up power may have a role to play to support otherwise renewable energy systems. (*Ref: to the Climate Council's 1st meeting, 24th August 2021.*)

Making an existing fossil-based operation more efficient is good, but it may not be sufficient for climate transition

- Increased efficiency does not in itself contribute to transition. In situations where there are no technical possibilities to transition a fossil-based business, efficiency could be of use, but should be analysed in the following manner:
 1. If the operation is vital for society to function: assess alternative usages for the operation. Investments in new and life-prolonging activities for existing fossil-based operations should be avoided.
 2. If the operation is vital to maintain societal functions: assess if the operation can be transitioned away from fossil fuels, but with maintained functionality.

Thereafter, efficiency in existing operations may be motivated if potential lock-in effects are considered at the same time.

A country's climate plans may be in line with the Paris Agreement, but not necessarily the 1.5-degree target.

- There is room for fossil fuels according to the principles of the Paris Agreement, but it is also clear that rich countries need to move first in climate transition, which is not currently happening. In practice, the room for new fossil investments is therefore limited if the 1.5-degree target is to be achieved.
- It is important to take the national energy context as a starting point for assessing countries' transition plans to fossil-free or size of emission reductions. In several cases, however, there are no references to the 1.5-degree target in national energy modelling scenarios. There is also an overall lack of climate modelling in several poorer countries (ref. Africa Integrated Assessment).
- The shift away from fossil fuels is to a large degree a question of human capacity - competence and knowledge - and thus there is an inherent inertia. *Ref: to the Climate Council's 1st meeting, 24th August 2021.*

What types of key projects are needed for climate transition, but that may be difficult to finance?

Some materials or solutions are particularly important for climate transition

- Reduction of methane emissions is top priority to achieve the 1.5-degree target (*Ref: to the Climate Council's 1st meeting and high methane emissions within natural gas' value chain*)
- Renewable solutions, including bio-based solutions
- Circularity
- Energy efficiency – considering however the nuances noted above.

Examples of key projects for the climate transition

- As a starting point, look for projects that can deliver components to solve important systemic issues; e.g. solutions to improve the electricity grid stability in Africa. Many key projects will be found in markets such as China or India.
- Waste management is one area where investments are urgently needed in order to
 - Eliminate methane emissions today
 - Facilitate circular material flows over time
- Solar-heating projects (n.b. not to be mixed up with solar-based electricity production) is another option with great potential.

Technology risk can aggravate financing

- It may be difficult to find financing for projects which are risky from a technical perspective (e.g. new or untested technology) but which at the same time may be of importance for development. What can be financed by loans and what needs risk capital?

Robust cost calculations and correct information facilitates financing of transition projects

- Ensure that updated data on cost is considered (costs are changing fast).
- The best available technological solution often provides the most beneficial cost calculation over time, meaning that a life cycle cost analysis is important. Such an analysis is often overlooked by the buyer and is therefore an important piece of information to require when discussing options for financing.

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