

Industrial decarbonization done right

Identifying success factors for well-functioning
permitting processes



SEI discussion brief
November 2021

Olle Olsson

1. Introduction

1.1 The urgency of industrial decarbonization

The last few years have seen several of the world's largest carbon dioxide-emitting countries and leading heavy industry companies committing to mid-century net-zero targets (Buckley 2021; Denyer and Kashiwagi 2020; McCurry 2020; Myers 2020). Consequently, the discussion on economy-wide transition to net-zero is accelerating, with focus shifting from “if” to “when” and “how”, even for heavy industry sectors like steel, cement and chemicals. This makes it increasingly urgent to analyse not just whether it is *technologically* feasible to decarbonize heavy industry, but also investigate issues more directly related to practical implementation. This includes site-specific planning, infrastructure availability, and consultation with local authorities and other stakeholders.

Many of the latter considerations are formalized as part of the permitting processes that are an essential vehicle to ensure that industrial interests are balanced against interests of society at large. However, doing this balancing act can turn out to be very complicated and associated with uncertainties as to their outcome, as well as being demanding in resources and time. At the same time, to ensure broad buy-in and support from society, the investments needed must be implemented in a way that takes a broad spectrum of sustainability concerns into account, not just climate change mitigation.

A key question is if and how permitting processes can run more smoothly and efficiently while still ensuring inclusive consultations, fair procedures and adherence to legal certainty. This policy brief discusses this question from the starting point of Swedish conditions, but many of the points raised will be relevant for a broader international discussion on taking industrial decarbonization to implementation.

1.2 Industrial transition and permitting processes in Sweden

Decarbonization of the industrial sector in Sweden essentially entails a relatively small number of investment projects in the cement, steel, petrochemical and refinery sectors, where the vast majority of carbon emissions are concentrated (Karlton et al. 2019; Nykvist et al. 2020). However, while few in number, the size of these investments means that their implementation will by necessity become relevant to many other parts of society.

IMAGE (ABOVE): © MARTIJN BAUDOIN /
UNSPLASH

In connection with the increasing focus on how to implement industrial decarbonization in Sweden, discussions about permitting processes have been brought higher up on the agenda. While there has been an active discussion on permitting processes in Sweden for quite some time, it has primarily been focused on aspects related to mining and wind power (Larsen et al. 2017; Raitio et al. 2020).¹ The last few years have, however, focused increasingly on industrial projects, in particular related to a proposed – though eventually cancelled – expansion of an oil refinery in the southwestern part of the country (Blad 2020).

In terms of political discussions, both the governmental initiative *Fossil-free Sweden* (2021) and the Swedish Climate Policy Council² (2020) emphasize that permitting processes need to become faster in order for Sweden's industrial transition to be implemented in line with the time plan set by the 2017 Swedish Climate Act. Business representatives and organizations are also voicing concerns about the slow speed of permitting (Balanskommissionen 2019; Jacke 2018). At the same time, criticism has been raised that much of the environmental damage done in Sweden comes from activities conducted within limits set by environmental permits, which could be a flaw in the system (Malmaeus and Lindblom 2019). Finally, recent public inquiries have also discussed permitting processes.³

2. Permitting process success factors: perspectives from companies and authorities

Many permitting processes work well and are characterized by cooperation and dialogue among involved actors. This points to a need to identify and highlight the factors that characterize well-functioning processes and how lessons learned from positive experiences can be disseminated and implemented more broadly. This was the objective of a workshop SEI organized in November 2020.

Most of the 11-12 participants⁴ represented either regional/national government agencies or industrial companies, with a few of the participants being experts or representatives of other stakeholder groups. The discussions therefore centered on the interactions between authorities and companies, but this is only a subset of the many important multi-actor interactions that are part of permitting processes.

The workshop process consisted of three sequential sessions: session 1 including the entire group and the following two in smaller break-out groups, with each segment centered on a guiding question.

2.1 Session 1: What defines a well-functioning permitting process?

As there can be differing views on what actually constitutes a “well-functioning permitting process”, it was important early in the workshop to define the concept. This was done through a pre-workshop survey conducted via e-mail, the results of which are summarized in Table 1.

1 A central point of contention here relates to the extent to which Swedish permitting processes take into account Indigenous rights of Sami reindeer herding communities in the northern part of the country.

2 The Swedish Climate Policy Council is an independent scientific body set up to ensure that Swedish policy is aligned with overall climate policy goals.

3 SOU 2019:30 (*Modern permitting processes for electricity networks*), Ds. 2018:38 (*Adapted environmental assessment for a green transition*) and Dir. 2020:86 (*A modern and effective environmental assessment*). A state public inquiry (SOU 2003:124) was already carried out in 2003 on a similar theme.

4 1-2 participants had to temporarily leave and were unable to participate for the full duration of the workshop.

Table 1. Key characteristics of a well-functioning permitting process, according to the workshop participants

<ul style="list-style-type: none"> • Transparency • Unambiguity • Time-efficient • Well-documented • Legal certainty 	<ul style="list-style-type: none"> • Predictability • Well-planned and structured • Characterized by dialogue • Appreciation of different roles • Early consensus on what the key issues are
--	--

In session 1, the participants discussed whether the 10 points in Table 1 included the most important aspects. The general consensus was that these were indeed key factors, but that the ten are of somewhat different character. For example, legal certainty is a fundamental principle of law, whereas others are more specific to the permitting process.

2.2 Session 2: What are key factors that enable a well-functioning permitting process?

In the next session, the participants conversed in three mixed groups of three to four persons each. Even though the three discussions were carried out independently, some common themes emerged as especially important for a well-functioning permitting process:

A first factor is **the site and the type of project**. For example, a project with a small land footprint that is sited far away from important ecological habitats, water resources or recreational areas will likely be fairly straightforward. There is obviously, then, an advantage if siting is flexible, which may or may not be the case depending on the the project in question.

Turning to more process-related factors, **competence and resources** were identified as particularly important and relevant. Perhaps not surprisingly, processes tend to run more smoothly the higher the competence of the key actors involved. This applies to both companies and permitting authorities, but in somewhat different ways. Companies applying need to make certain that all aspects are clearly explained and illustrated and also be transparent about the rationale for different choices made in the project plan. For permitting authorities, competence among case officers is often correlated with experience – not only in terms of general experience, but of the specific type of project in question. This makes a stable workforce, institutional memory and routines for organizational learning important factors.

Finally, aspects related to actual **conduct and attitudes** may be less tangible, but still very important. One thing the discussions stressed is the importance of mutual respect and understanding of the different roles actors play in the overall process. It is beneficial for the quality of the process if the overall character of the permitting process is of *dialogue* rather than *haggling*. On a similar note, it was observed that a more continuously ongoing consultation process is often more valuable than one limited to a few concentrated interactions.

2.3 Session 3: What needs to change to make more permitting processes well-functioning?

The final workshop session focused on collecting the participants' views on the actions required to improve permitting processes. Here, they were asked to distinguish between a) changes that require regulatory reform, and b) changes that can be implemented within existing frameworks.

On the whole, category b) action points dominated, though there were a handful of suggested action points that required regulatory reform. These focused especially on different suggestions for how agency responsibility for permitting processes to a larger extent would be allocated by project *type* rather than by project *location*, as is currently the case. In terms of recommended action points that could be implemented without regulatory reform, several of these are connected to issues discussed under the *competence and resources* theme in section 2.2 above. One recommendation here was that companies themselves should aim to be more directly involved in the process, rather than outsourcing the permitting process to consultants. There was also a recommendation for companies to be meticulous in procuring consulting services and make sure to commission advisors with necessary experience and adequate expertise. On a related note, stable long-term funding for key permitting authorities was seen as an important factor to build and maintain strong institutional expertise. Too much reliance on short-term project-type funding can make it difficult to recruit and employ expert case officers on a permanent basis.

When it comes to making sure that the processes are more in the form of dialogue than of haggling, companies can contribute to this by being proactive in planning and ensuring that the permitting process team is highly competent and well-staffed. Authorities, on their part, could be more direct in highlighting early on the aspects that will be most important in the particular case in question. Workshop participants, however, also emphasized that for case officers working at authorities, there could be a tension in taking more of a dialogue approach, as there is a traditional tendency for authorities to prioritize correct formal procedures and unbiasedness. There could be a need to develop new guidelines that describe approaches whereby a dialogue-focused approach can be combined with the formal responsibilities of authorities.

3. Discussion

It is imperative that governments and industries alike recognize that along with innovation, process optimization and policies that support demand for low-emission products, well-functioning permitting processes are a key component of industrial decarbonization. It is equally important to recognize that for most industrial decarbonization projects, there will be conflicting interests between different stakeholder groups, between different sustainability targets and among local, national and global priorities. Navigating these may not be easy,⁵ but even if the outcomes of the permitting processes do not meet the expectations of all involved actors, this should not be because the process itself is flawed.

⁵ As is discussed by Raitio et al (2020), some activities may very well be impossible to combine.

There may certainly be a need for regulatory reform to make permitting processes more efficient, more predictable and more equitable, but much can be done to improve permitting processes even within existing frameworks. Much of this seems to boil down to competence, resources and overall procedural conduct. This to a large extent echoes the conclusions drawn by Pettersson & Söderholm (2019), who analyze similar questions based on a series of case studies.

In terms of actions that need to be taken to enable better-functioning permitting processes, this will to some extent vary between jurisdictions, as well as between industrial sectors. However, some general recommendations can be given based on the results of the workshop. Companies should, to a larger extent, view permitting process work and stakeholder dialogue as a core competence, as these factors could be vital for timely completion of high-stakes investments. Governments, on their part, need to make sure that institutions are prepared to manage the practical challenges that will come from transitioning to a net-zero-compatible society in less than three decades. It is key that regulatory frameworks and public institutions adapt to partially regulate, partially manage and partially accommodate this transition. One simple, but still central, aspect is to allocate sufficient resources so that permitting authorities are properly staffed. While such measures may not be as politically rewarding as funding investments into spectacular industrial megaprojects, they may be of equal importance for making sure industrial decarbonization is made possible in a way that implementation is truly sustainable.

References

- Balanskommissionen (2019). *Balanskommissionens Hinderrapport: Står Miljölagstiftningen i Vägen För Att Bygga Det Nya Hållbara Sverige?* https://balanskommissionen.se/app/uploads/2019/08/Balanskommissionen_Hinderrapporten-1.pdf
- Blad, T. (2020). *The Discursive Battle for Lysekil : An Argumentative Discourse Analysis of the Swedish Preem Refinery Debate.* <http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-189826>
- Buckley, T. (2021). World's biggest Steel manufacturers are committing to Hydrogen and CCS. *Energy Post*, 11 January 2021. Carbon Capture. <https://energypost.eu/worlds-biggest-steel-manufacturers-are-committing-to-hydrogen-and-ccs/>
- Denyer, S. and Kashiwagi, A. (2020). Japan, world's third largest economy, vows to become carbon neutral by 2050. *Washington Post*, 26 October 2020. https://www.washingtonpost.com/world/japan-climate-emissions/2020/10/26/b6ea2b5a-1752-11eb-8bda-814ca56e138b_story.html
- Fossilfritt Sverige (2021). Färdplaner för fossilfri konkurrenskraft – uppföljning 2021. https://fossilfritt sverige.se/wp-content/uploads/2021/10/Fardplaner_for_fossilfrikonkurrenskraft_u ppfo%CC%88ljningsrapport_2021.pdf
- Jacke, J.-O. (2018). Reformerna kan inte vänta. *Dagens Industri*, 4 November 2018. <https://www.di.se/debatt/reformerna-kan-inte-vanta/>
- Karltorp, K., Bergek, A., Fahnestock, J., Hellsmark, H. and Ulmanen, J. (2019). *Statens Roll För Klimatomställning i Processindustrin: Utmaningar Och Möjligheter För Socioteknisk Omställning i Svensk Industri För Framställning Av Järn-Och Stål, Cement, Raffinaderiprodukter Och Kemikalier*
- Klimatpolitiska rådet (2020). *Klimatpolitiska Rådets Rapport 2020* Stockholm. <https://www.klimatpolitiskaradet.se/wp-content/uploads/2020/05/klimatpolitiskaradetrapp2020.pdf>
- Larsen, R. K., Raitio, K., Stinnerbom, M. and Wik-Karlsson, J. (2017). Sami-state collaboration in the governance of cumulative effects assessment: A critical action research approach. *Environmental Impact Assessment Review*, 64. 67–76. DOI: 10.1016/j.eiar.2017.03.003
- Malmaeus, M. and Lindblom, E. (2019). Miljömålen äventyras – med tillstånd! *Dagens Samhälle*, 14 March 2019. <https://www.dagenssamhalle.se/debatt/miljomalen-aventyras-med-tillstand-26610>

Published by

Stockholm Environment Institute
Linnégatan 87D, Box 24218
104 51 Stockholm, Sweden
Tel: +46 8 30 80 44
DOI: 10.51414/sei2021.034

Author contact

olle.olsson@sei.org

Media contact

lynsi.burton@sei.org

Visit us: sei.org

Twitter: [@SEIresearch](https://twitter.com/SEIresearch)
[@SEIclimate](https://twitter.com/SEIclimate)

Stockholm Environment Institute is an international non-profit research and policy organization that tackles environment and development challenges. We connect science and decision-making to develop solutions for a sustainable future for all.

Our approach is highly collaborative: stakeholder involvement is at the heart of our efforts to build capacity, strengthen institutions, and equip partners for the long term.

Our work spans climate, water, air, and land-use issues, and integrates evidence and perspectives on governance, the economy, gender and human health.

Across our eight centres in Europe, Asia, Africa and the Americas, we engage with policy processes, development action and business practice throughout the world.

McCurry, J. (2020). South Korea vows to go carbon neutral by 2050 to fight climate emergency. *The Guardian*, 28 October 2020. World news. <https://www.theguardian.com/world/2020/oct/28/south-korea-vows-to-go-carbon-neutral-by-2050-to-fight-climate-emergency>

Myers, S. L. (2020). China's Pledge to Be Carbon Neutral by 2060: What It Means. *The New York Times*, 25 September 2020. World. <https://www.nytimes.com/2020/09/23/world/asia/china-climate-change.html>

Nykvist, B., Maltais, A. and Olsson, O. (2020). *Financing the Decarbonisation of Heavy Industry Sectors in Sweden*. Stockholm Sustainable Finance Centre. <https://www.stockholmsustainablefinance.com/financing-the-decarbonisation-of-heavy-industry-sectors-in-sweden/>

Pettersson, M. and Söderholm, P. (2019). *Miljölagstiftningens Betydelse För Stora Kunskapsintensiva Investeringar*. PM 2019:15. Tillväxtanalys

Raitio, K., Allard, C. and Lawrence, R. (2020). Mineral extraction in Swedish Sápmi: The regulatory gap between Sami rights and Sweden's mining permitting practices. *Land Use Policy*, 99. 105001. <https://doi.org/10.1016/j.landusepol.2020.105001>

ACKNOWLEDGEMENTS

This policy brief has been produced as part of the HYBRIT RP1 project and is financed by the Swedish Energy Agency. Thanks to the participants of the November 2020 workshop, which was made possible by facilitation and note-taking by Katrin Danerlöv, Jindan Gong, Marie Jürisoo, Ylva Rylander, Robert Watt and Max Åhman, and with technical support from Ian Caldwell. Thanks also to Maria Pettersson (Luleå Technical University) and an anonymous SEI reviewer for comments on an earlier version of this brief. Any remaining errors or omissions are the responsibility of the author.
