

8th International Conference on Smart Energy Systems 13-14 September 2022 #SESAAU2022



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FAST FORWARD FOR POWER-TO-X IN DENMARK: THE ROLE OF ADVOCACY COALITIONS IN SHAPING POLICY

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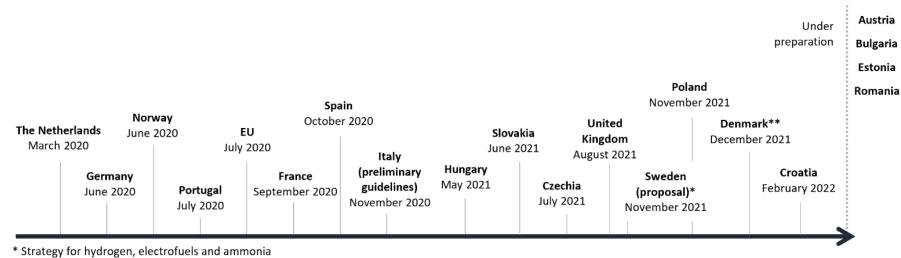
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POWER-TO-X

Denmark's keeping the forerunner position



**Power-to-X strategy

Forerunners, like Denmark, tend to introduce stronger environmental policy protection before the EU, due to either national domestic interests or pressure from domestic actor, in the form of specific advocacy coalitions.

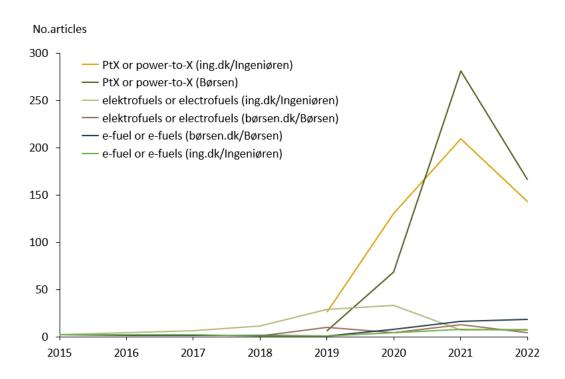
Dyrhauge, 2017





Rising awareness

Public debate



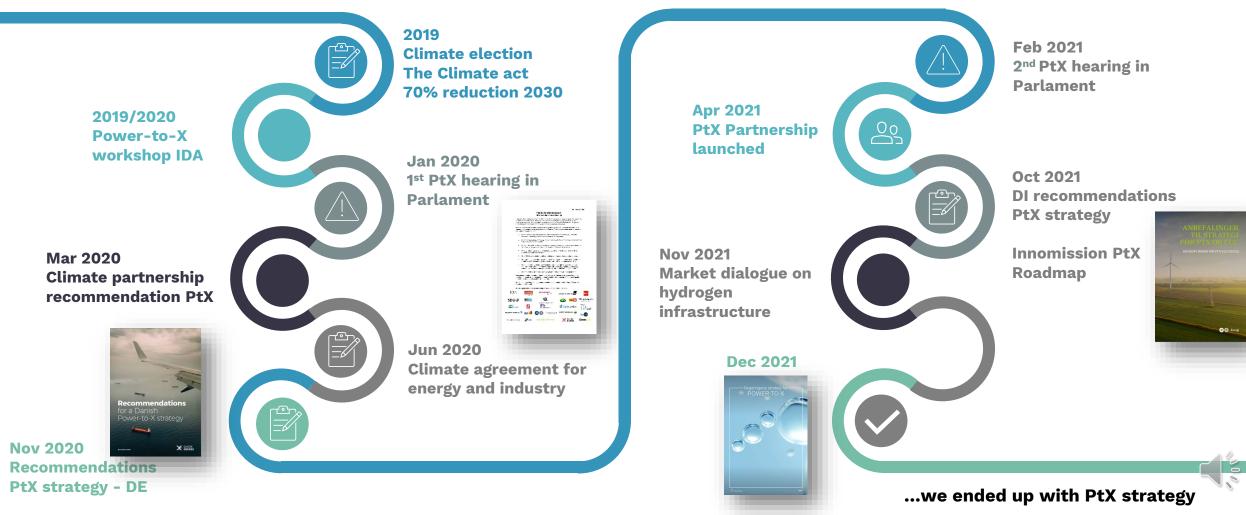
From futurism to political reality: in 2019 power-to-x is on everyone's lips Børsen, 2019





10 highlights on the journey towards PtX strategy

After 9 years waiting ...







Advocacy Coalition(s) setting the agenda

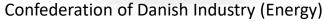


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74 actors in total were identified

Danish Energy (Green Power Denmark)









United but divided

Shared opinions

Technology and market risks should be shared between private investors and society

Types of support policies

Circle K pushed for CO₂ displacement requirements (regime actor)

GPD tender focused, public tenders, funding for consumer side DI suggesting Contract for Difference, CfD and public funding

Market mechanism

DI much more market oriented



In Denmark, we must expand our production of renewable energy and at the same time significantly reduce our CO2 emissions. This will require completely new methods for energy storage and sector coupling (...) We believe that the Power-to-X technologies are an **Obvious solution** that will be able to realize this, and that Denmark has the potential to be a front runner in this field. *Memorandum of understanding, 2020*

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Power-to-X (PtX) is a **decisive solution** that can replace the last fossil consumption in our industry, the heavy road transport as well as shipping and aviation. PtX is thus a significant contribution to solving the world's climate challenges. *DE / GPD, 2020*

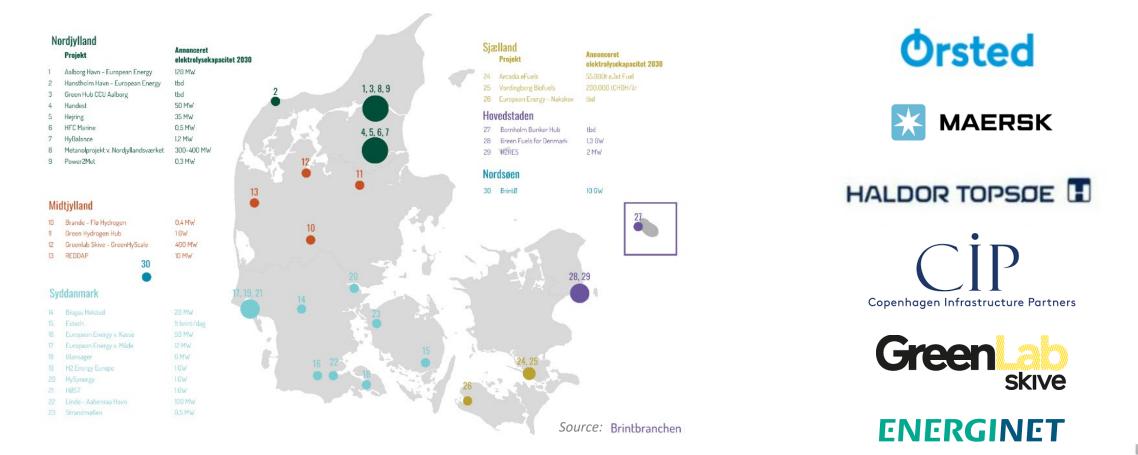
A thorough restructuring and electrification of society based on renewable energy sources will be necessary. The use of sustainable hydrogen, electro-fuels and chemical products based on electrolysis - or what can be briefly defined as Power-to-X (PtX) - will become an **inevitable part** of the transition. *DI*, 2021







Denmark's new business adventure with Power-to-X





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