

## POLICY BRIEF

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Concerning: Legal framework for the realization of offshore solar parks: Civil law considerations  
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### 1 INTRODUCTION & CONCLUSION

- 1.1 The SENSE-Hub project aims to accelerate the potential rollout of offshore solar into offshore renewable energy systems. The future offshore renewable energy system is envisioned to consist of wind turbines, platforms with electrolyzers, power export cables, and pipelines to transport green hydrogen. The addition of offshore solar can be of critical importance for the feasibility of these systems. Firstly, offshore solar allows for additional energy generation without additional spatial requirements. Secondly, it presents rewarding system integration opportunities as the energy patterns of solar and wind are complementary. The goal of the SENSE-Hub project is to develop an understanding of the merits and challenges for enhancing offshore renewable energy systems with a second, complementary energy generation source. The project addresses the integration of various energy system modules and the validation of the concept by focusing on the technical, economic, ecological, and legal implications.
- 1.2 For the purpose of the SENSE-Hub research project, legal research has been conducted to provide an overview of the legal framework for the realisation of offshore solar parks and their integration into the electricity transmission system as well as potential challenges and questions that may arise during the realisation of offshore solar parks. The research examined (i) the application of Dutch private law, (ii) the structuring of collaborations, and (iii) the establishment of contracts between consortiums and third parties. Key areas of focus included the relevance of applicable United Nations treaties, the application of the Dutch Civil Code (“**DCC**”)—specifically Civil Code Books 5 and 10—and the legal possibilities for connecting offshore solar installations to the electricity grid, either as stand-alone systems or through cable pooling arrangements.
- 1.3 Based on our research, it can be concluded that the legal framework for offshore solar development in the Netherlands presents several key challenges. While the government recognises offshore solar as a promising complement to offshore wind energy, the applicable legal provisions still contain uncertainties that may hinder the realisation of offshore solar farms. These uncertainties and challenges are not new; they have existed since the development of the first offshore wind farms and have not yet been clearly addressed by the Dutch government. A structural or comprehensive solution to these legal uncertainties does not appear to be under active consideration, and as such, a solution for the legal uncertainties remains pending.
- 1.4 This policy brief presents a summary of the key findings from the legal research. It outlines only the applicable legal framework for a clear understanding of the challenges and the amendments required to enhance offshore solar integration. It highlights the most relevant aspects of the legal framework and, based on these insights, provides a set of targeted policy recommendations to support the realisation of offshore solar installations.

- 1.5 Chapter 2 outlines the key civil law findings concerning offshore solar development in the Netherlands. Chapter 3 identifies the main challenges and provides targeted recommendations to strengthen the legal framework for offshore solar integration.

## 2 KEY FINDINGS ON OFFSHORE SOLAR REGULATION

### 2.1 Installations beyond territorial waters: a blind spot for Dutch international proprietary law

- 2.1.1 The SENSE-Hub is expected to be located partly within the Netherlands' territorial sea and partly within its exclusive economic zone (**EEZ**). This geographical distinction has significant legal implications. While the legal regime in the territorial sea is analogous to that on land, the situation within the EEZ is more complex and remains the subject of legal debate, particularly in relation to ownership rights and the applicability of Dutch property law.
- 2.1.2 Within the territorial sea, which extends up to twelve nautical miles from the coast, Dutch law—including the DCC—fully applies. According to Article 2 of the United Nations Convention on the Law of the Sea (**UNCLOS**), the Netherlands exercises sovereignty over this zone, which includes the seabed. Under Article 5:25 DCC, the seabed in the territorial sea is inalienably owned by the Dutch State, meaning it cannot be transferred to third parties. This has direct legal consequences for any installations that are placed on the seabed.
- 2.1.3 To prevent installations of such offshore energy systems from becoming part of the seabed—or from being considered part of other connected installations under Dutch legal doctrines such as accession (*natrekking*)—traditional legal instruments such as the right of superficies or rights of pledge can be used. These mechanisms ensure that the ownership of the installations remains separate from the ownership of the seabed or other infrastructure, enabling clear legal demarcation and facilitating external investment or financing arrangements.
- 2.1.4 In contrast, the legal landscape in the EEZ, which lies beyond the territorial sea, is more ambiguous. Under articles 56 and 60 of UNCLOS, the Dutch State exercises sovereign rights for specific purposes, including but not limited to the exploration and exploitation of natural resources and the development of energy from wind, currents, and water. The Dutch State also has jurisdiction over the construction, operation, and regulation of artificial installations, marine scientific research and the protection of the marine environment.
- 2.1.5 The Netherlands has extended the applicability of several national laws to its EEZ, such as the Environment and Planning Act (*Omgevingswet*), the Electricity Act 1998 (**E-Act**) (*Elektriciteitswet 1998*), and the **Offshore Wind Energy Act** (*Wet wind op zee*). However, the DCC has not been explicitly declared applicable in the EEZ. As a result, the legal status of property and security rights and interests under Dutch civil law in the EEZ is uncertain. This legal uncertainty has led legal authors to express a wide range of views on the matter.
- 2.1.6 Together with several legal authors, we take the position that within the EEZ article 10:130 DCC should be applied by analogy. This article states that property rights vested under Dutch law remain vested in the object, even if that object is subsequently moved to another jurisdiction. By applying this article to the EEZ by analogy, it can be said that installations (such as solar panels, transformers, measurement devices, or hydrogen production units) that are acquired or have limited property rights

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vested in them lawfully under Dutch law *before* deployment, retain their ownership status even *after* placement in the EEZ.

- 2.1.7 This interpretation also implies that key concepts of the DCC—such as accession (*natrekking*) or formation (*zaaksvorming*)—do not apply within the EEZ. The seabed in the EEZ is not governed by the same proprietary regime as land or the territorial sea, and thus installations placed there do not automatically become the property of the State or of other installation owners by virtue of physical attachment. Each party that owns part of the SENSE-Hub infrastructure will therefore retain ownership of its respective components within the EEZ. Moreover, each owner remains entitled to enter into contracts or to create security rights (such as pledges) based on Dutch law, provided those rights are established before the components leave the territor(y)(ial waters). Importantly, UNCLOS does not contain any provisions that invalidate or override such national ownership structures once objects are placed within the EEZ.

## 2.2 The legal disconnect in grid access: the absence of a right to connect to the grid

- 2.2.1 The E-Act is applicable to both the offshore electricity grid and installations for the production of electricity located within the EEZ, as well as to the electricity produced by those installations (article 1, section 5 E-Act). Although originally intended to regulate offshore wind farms, the broadly worded provision allows for the potential inclusion of offshore solar farms within its scope. However, this legal reach is limited. The E-Act does *not* regulate the offshore storage of electricity (e.g., battery storage systems), nor does it cover the offshore production of hydrogen through electrolysis. This omission leaves producers of solar energy, hydrogen, or battery-stored electricity without a clear legal route to grid connection or system integration within the current statutory regime.
- 2.2.2 A partial legal foundation for offshore energy storage and non-electrical energy conversion can be found in the Offshore Wind Energy Act. This act defines a wind farm as a combination of facilities that convert wind into energy sources—including not only electricity but also hydrogen, ammonia, or other derivatives (Article 1 Offshore Wind Energy Act). As such, energy conversion and storage installations can legally fall within the definition of a wind farm, provided they serve the function of processing or storing wind-generated energy.
- 2.2.3 The Offshore Wind Energy Act also defines the concept of a connection point (*aansluitpunt*). The term connection point not only refers to connections to the offshore grid (*net op zee*), but also to connection points of other installations, such as hydrogen factories or storage facilities. This enables, in principle, the transportation of energy products—electricity or otherwise—via cables, pipelines or other means to the mainland or directly into other industrial or logistic systems (e.g., shipping or road transport).
- 2.2.4 Under the current E-Act, the obligation of the offshore grid operator to connect and transport energy only applies to holders of offshore wind farm permits issued under the Offshore Wind Energy Act (Article 24Aa E-Act). This means that permit holders for offshore solar farms (issued under, for example, the Water Act) do not enjoy a right to grid connection. The same limitation applies to hydrogen production facilities and battery storage units unless such installations are expressly included in a wind farm permit as ancillary infrastructure, as described above.
- 2.2.5 For solar farms and other non-wind facilities, cable pooling—i.e., the sharing of an existing grid connection—remains the only feasible pathway to grid access. Legally, this is only provided for in

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the context of onshore wind-solar combinations, where a joint production facility may be designated and entitled to connection and transport rights under Articles 1.1 sub ah, 23, and 24 of the E-Act. This statutory recognition, however, does not extend to offshore combinations.

- 2.2.6 Despite the absence of a legal regime for offshore cable pooling, practical arrangements remain possible. Parties involved in offshore wind and solar projects can contractually agree to share grid infrastructure and jointly utilize (offshore) connection points. Such agreements are not prohibited and may serve as a practical workaround in the current legal environment. However, for existing offshore wind farms with financing arrangements and permits already in place, it is likely to be commercially difficult to come to the cable pooling arrangements required to integrate solar into an already operational wind project.
- 2.3 A legislative proposal is currently under consideration to extend the E-Act's provisions on cable pooling to cover more flexible combinations of energy sources, including solar and hydrogen production, as well as energy storage initially in the onshore context. Whether and when similar provisions will be adopted for offshore infrastructure remains uncertain. Until such amendments are enacted, the lack of a statutory right to connect remains a significant barrier for non-wind offshore energy projects.

## 3 IDENTIFIED CHALLENGES AND RECOMMENDATIONS FOR OFFSHORE SOLAR

### 3.1 Legal uncertainty in the EEZ

- 3.1.1 The absence of legal provisions applying the DCC to the EEZ leads to uncertainty regarding ownership and security rights for offshore solar infrastructure. This legal uncertainty complicates asset-based financing and increases investment risk.
- 3.1.2 The Dutch legislator should clarify the application of property law within the EEZ by explicitly extending the relevant provisions of the DCC, particularly Books 5 and 10, to installations transported to or located in the EEZ in accordance with article 56 section 1 sub (a) UNCLOS. This article stipulates that the coastal state is permitted to produce energy from, among other sources, water, currents and winds. This would remove uncertainty regarding the creation and enforcement of property and security rights and enable market participants to confidently structure legal and financial arrangements.

### 3.2 Lack of statutory grid connection rights for offshore solar

- 3.2.1 Currently, the right to be connected to the offshore electricity grid is limited to holders of offshore wind permits. Offshore solar farms do not enjoy a comparable right, creating unequal legal treatment and hindering the realisation of solar energy in offshore zones—also from a financing perspective.
- 3.2.2 An amendment of the E-Act to include offshore solar installations, hydrogen production units, and energy storage systems as eligible for grid connection rights should be considered. This can be achieved by broadening the definitions in Articles 1 and 24Aa to include rather than limiting the scope to offshore wind.

### 3.3 Inadequate legal framework for offshore cable pooling

- 3.3.1 Although cable pooling arrangements are recognised by law in onshore contexts, offshore projects lack an equivalent legal basis. This omission inhibits efficient use of grid infrastructure and integration of solar with wind energy.
- 3.3.2 The Dutch government should accelerate the legislative process for extending cable pooling provisions to the offshore context. A clear legal framework for shared infrastructure across different energy modalities (wind, solar, hydrogen, storage) would enhance system efficiency and reduce spatial and financial constraints.
- 3.4 **Regulatory gaps for non-electric energy conversion and storage offshore**
- 3.4.1 The current legal regime does not fully accommodate offshore energy storage (e.g., batteries) or non-electric energy carriers (e.g., hydrogen or ammonia). This creates a fragmented legal landscape that complicates integrated energy system development.
- 3.4.2 The relevant legislation (E-Act and Offshore Wind Energy Act) should be revised to explicitly recognise and regulate multi-modal energy systems, including provisions for permitting, grid access, and interconnection for non-electric energy infrastructure in the offshore domain.

## 4 CONCLUSION

The integration of offshore solar energy into the Dutch offshore renewable energy system presents promising opportunities but remains constrained by legal and regulatory limitations. Addressing these challenges requires targeted legislative amendments and policy coordination. By clarifying the applicability of the relevant laws, extending grid access rights, enabling offshore cable pooling, and embracing multi-modal offshore energy systems, the Netherlands can strengthen its legal framework and unlock the full potential of offshore solar as a complementary and scalable energy source.

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