

Stavanger, 06 September 2018

Dear Madam/Sir,

Tampnet would like to thank you for the opportunity to react on the proposed changes to the National Frequency plan described in the internet consultation *NFP Wijzigingspakket 2018-1* issued July 26th, 2018.

Tampnet will respond in a general manner that covers what we think will be the best policy to maximize benefit to the Dutch population, industry and society in general related to the areas in which we operate, and not necessarily to the specific questions asked in the consultation material provided. Our input is based on 17 years of operating telecommunications networks in the North Sea.

Tampnet is a specialized telecommunications operator, focusing on the offshore oil and gas industry, but also serving onshore customers. Our core business is to build robust and reliable telecommunications infrastructure based on subsea fiber cable, microwave radio links and 4G/LTE technology to serve our customers in the offshore regions of the world where we operate. In the North Sea we will operate about 150 microwave radio links, 2600km of buried submarine fiber optic cable and about 70 4G/LTE eNodeB base stations within the next few years.

Our main concern is that valuable and useful radio frequency spectrum is not being used offshore, where it is needed. The current base case in Dutch Telecom Law is that spectrum awarded onshore is also valid in the entire EEZ offshore. This fact, in combination with a very tough competitive market in the mobile industry means that no operator is willing to spend the money to build mobile networks offshore due to the lack of dense population in this region. This means that increasingly important 4G (and beyond) services remain unavailable in the offshore region, where a lot of value creation is performed by several important industries (fishing, energy, shipping, governmental, meteorological etc.). Digitalization and technological evolution will happen largely through access to high speed and high-quality communications infrastructure, and we believe it is important to make this available also offshore.



Specialized telecom operators building infrastructure offshore see high value in building 4G/LTE offshore since this technology supplements fixed networks nicely. However, without access to reasonably priced spectrum there is no business case to build. We therefore urge you to make provisions for making relevant radio frequency spectrum available in these regions for operators that are willing to invest in infrastructure and who can serve this important region of the Netherlands.

Due to the remote location and special operating environment offshore in the Dutch EEZ, it is our general view that as many frequency spectrum resources as possible should be made available to offshore operators, and not locked down by onshore spectrum holders that will never use the spectrum offshore. This includes spectrum for fixed links, mobile services and potential other bands with different allocations. Mentioned in the frequency table attached to the consultation are changes in resource allotment in the 700Mhz frequency band, and the 1800MHz band. For the 700Mhz band an allotment for mobile communication is proposed. To ensure full utilization of this resource, also offshore, and to ensure development of broadband accessibility at sea we would like to express the importance of a separation between onshore and offshore license allocation. For offshore the challenge is around gaps in connectivity, connecting devices, and dealing with the data generated. Making spectrum available for offshore LTE use will contribute to the ability to support the growing business critical data communication.

Allocating spectrum resources offshore could be performed on a competitive basis, by arranging an auction to distribute spectrum in the offshore area. Another alternative, adopted by several other administrations, is to issue licenses on an individual transmitter station basis. This is our recommended model, as it provides the administration with full control in evaluation of interference issues with onshore spectrum users, as well as avoiding the workload of arranging an auction to distribute the spectrum. The nature of the offshore area means that the number of potential sites is limited to probably less than 200 sites due to the number of surface installations in the EEZ (more likely less than 30-40 will be used due to range and backhaul options). As such, the workload for the Agentschap Telecom will be limited in administration of the spectrum offshore.

Again, we thank you for considering our opinions, and wish you luck in setting important policy regulations to improve safety, value creation and welfare for Dutch industry and society.

Best regards,

Luut van der Molen Project Manager Tampnet Netherlands BV