

Carbon Capture and Storage Association Response to

Planning Scotland's Seas – Scotland's National Marine Plan Consultation Draft

Introduction

The Carbon Capture and Storage Association welcomes this opportunity to respond to *Planning Scotland's Seas – Scotland's National Marine Plan Consultation Draft*.

The CCSA brings together a wide range of specialist companies across the spectrum of CCS technology, as well as a variety of support services to the energy sector. The Association exists to represent the interests of its members in promoting the business of CCS and to assist policy developments in the UK and the EU towards a long term regulatory framework for CCS, as a means of abating carbon dioxide emissions.

Overall, we support the draft National Marine Plan and the Scottish Government's vision for the marine environment; "*clean, healthy, safe, productive and biologically diverse oceans and seas, managed to meet the long term needs of nature and people.*" We particularly welcome the emphasis on CCS in the Consultation Draft – not just in relation to mitigating climate change, but also in relation to the economic benefits that CCS can bring to Scotland.

General comments:

The Consultation Draft makes reference in a number of places to the importance of integration between marine and terrestrial planning. We note that this integration is of particular importance for CCS – due to the fact that CCS straddles the terrestrial environment (CO₂ capture from onshore power stations and industrial facilities, as well as onshore pipelines) and the marine environment (offshore pipelines and injection facilities) in one project.

Comments on Chapter 4 (General Policies):

GEN 1: *There is a presumption in favour of sustainable development and use of the marine environment when consistent with the policies and objectives of this Plan.*

The justification to this policy states that "*This is relevant to all marine activities, but is especially important for the sectors that the Scottish Government's Economic Strategy have identified as being key growth sectors – economic activities that Scotland specialises in. These include oil and gas and renewable energy activities, tourism, and*

food and drink (such as aquaculture and fisheries).” We would recommend that CCS should also be referenced in this section as a key growth sector for Scotland – particularly as the Consultation Draft emphasises the importance of CCS (in chapter 10) in “making a significant contribution to the security of supply and promoting economic growth opportunities”.

GEN 5: *Development proposals which enable multiple uses of marine space are encouraged where possible in planning and decision making processes, when consistent with policies and objectives of the Plan.*

We welcome the introduction of a specific policy to encourage co-location between marine industries and activities. We believe that Scotland’s first National Marine Plan has a significant role to play in setting out high-level principles for co-location of activities. This pertains to both co-location of two or more marine industries (such as wind and CCS) but also to co-location of marine industries and marine protected areas. We believe this subject merits further discussion – in particular we would like to see more detailed discussion of example activities that could co-locate in Scotland, their respective planning and regulatory requirements, and opportunities for early streamlining of infrastructure. In addition, an economic assessment of the benefits of co-location versus business as usual (no co-location) would be extremely welcome.

We believe that any discussion on co-location must include the eventual need to prioritise activities based on national high-level policies and objectives (such as energy security, climate change, growth, jobs etc). Although we understand that Scotland’s National Marine Plan cannot set out these priorities, it would be helpful if national policies and objectives were referenced in the Consultation Draft together with an indication of how such objectives could translate into eventual priorities and policies as well as who would be responsible for making those priorities.

GEN 10: *Decision making in the marine environment will be based on a sound evidence base as far as possible. Where evidence is inconclusive, reasonable efforts should be made to fill evidence gaps. Decision makers may also need to apply precaution within an overall risk based approach.*

We are pleased to note the reference to “*risk based approach*” in this policy, however we urge caution in relation to those situations where evidence is inconclusive. Developers are increasingly being required to provide ever-increasing amounts of evidence and carry out extensive management measures to satisfy requirements set out in a number of policies in the UK. It is vital that these policies have regard to the cost implications and potential delays in development timelines as a result of these measures.

Comments on Chapter 9 (Oil & Gas):

We are pleased to see that this chapter emphasises the important interaction between the oil & gas sector and CCS. In particular, we welcome the reference to the important role of CO₂ Enhanced Oil Recovery (EOR) – as this could deliver significant benefits to Scotland in terms of additional oil revenue, deferred decommissioning and the potential to reduce the costs of CO₂ storage.

Whilst this chapter does set out the benefits of the oil & gas sector for CCS, we believe reference should also be made to the benefits of CCS for the oil & gas sector. An ambitious deployment programme for CCS in Scotland has an important role to play in maintaining a healthy oil & gas sector in Scotland, in the following ways:

- Re-using vital infrastructure (where possible) for CCS will help to retain important Scottish assets
- The re-use of oil & gas infrastructure for CCS – as well as storing CO₂ in combination with EOR – will also defer the not insignificant costs & liabilities related to decommissioning of oil & gas infrastructure
- CO₂ storage will rely on the transfer of relevant oil & gas sector jobs, skills & expertise, and will therefore help to maintain crucial employment in Scotland – which might otherwise be lost.

Comments on Chapter 10 (CCS):

Overall, we welcome the positive focus on CCS in this chapter, particularly the objectives related to the potential for “*Scotland to be at the forefront of the development and deployment of CCS technology...*” and the intention to make “*CCS available as a realistic low carbon deployment option for electricity generation in advance of 2020...*”.

We have a number of comments related to this chapter:

- Firstly, the word “demonstration” is used a number of times in this chapter to describe CCS projects. Whilst it is true that these are first-of-a-kind projects (in scale-up and chain integration), these are not technology demonstration projects (the word “demonstration” is traditionally used for small pilot-scale projects which are far from commercial maturity). The individual parts of the CCS chain are all proven technologies in various industries around the world, and it is therefore misleading to give the impression that these projects are demonstrating technology. We would propose that these projects are entitled “early” or “first” “CCS projects in Scotland”.
- The chapter has very little mention of the importance of CCS for industrial sectors. Due to the fact that the CO₂ emissions from industrial sectors (such as steel, cement and refineries) are process as well as fuel-generated, these sectors have no other decarbonisation option aside from CCS. We would recommend that this chapter includes a section on CCS for industrial sectors, particularly emphasising the economic benefits related to job retention & creation and the value to the Scottish economy that these sectors contribute.
- Re-using infrastructure for CCS is rightly emphasised in a number of places as an important aspect of Scotland’s potential for CCS. It is however important to emphasise that it may not always be possible to re-use existing infrastructure, particularly pipelines. This is because in some cases the existing pipeline design is not appropriate for CO₂ but more importantly because in many cases the existing pipelines are not likely to be located in the most practical area – in terms of the distance from the onshore CO₂ source to the offshore storage site.
- *Part 1: Background and context* sets out the challenge “*to create the appropriate financial, regulatory and policy structures to enable the development of CCS projects in Scotland*”. This section then emphasises carbon prices as a critical element to “*make CCS viable*”. Whilst the EU Emissions Trading Scheme should

remain as the long-term driver for all low-carbon technologies (including CCS), it must be recognised that current carbon prices will not incentivise CCS. Interim (and complementary) measures must therefore be introduced to bring forward CCS projects. The UK has come a long way in this regard with the introduction of Electricity Market Reform (EMR) and the Contract for Differences (CfD) mechanism – which will incentivise low-carbon technologies into the future. We strongly recommend that this chapter includes reference to the EMR framework with a clear signal of support from Scotland for this framework.

- In *Part 2: Key issues for marine planning*, there are two references to the very small risk that CO₂ could escape from the storage site into the marine environment, causing “*local acidification with the potential for permanent effects on marine habitats*”. We would like to emphasise that studies have shown the local impacts of a CO₂ escape into the marine environment to be minimal. In particular a study by Plymouth Marine Laboratory concludes that “*given the available evidence, the environmental impact of a sequestration leak is likely to be insignificant when compared to the expected impact from continued non-mitigated atmospheric CO₂ emissions and the subsequent acidification of the marine system*”¹.
- The section on “*Living within environmental limits*” notes the importance of “*monitoring and verification*”. It should be noted that the EU CCS Directive contains very detailed monitoring, reporting and verification requirements and these should be held up as the standard in any policies where this topic is discussed.

The view expressed in this paper cannot be taken to represent the views of all members of the CCSA. However, they do reflect a general consensus within the Association.

¹ *Regional scale impacts of distinct CO₂ additions in the North Sea*, Marine Pollution Bulletin 56 (2008) 1461-1468
The Carbon Capture & Storage Association