

## 2050 Call for Evidence questions

### 1. Scope of model:

(a) Are there any low carbon technologies or processes or major demand-side options which are not currently included within the scope of the model but that you consider should be in future?

### 2. Scope of sectors:

(a) Does the range of alternative levels of ambition presented for each sector cover the full range of credible futures? If not, what evidence suggests that the range of scenarios should be broader than those presented?

(b) Do the intermediate levels of ambition (levels 2 and 3) provided for each sector illustrate a useful set of choices, or should they be moved up or down?

(c) The 2050 Pathways Calculator currently describes alternative directions of travel rather than different levels for some sectors where changes reflect a choice rather than a scale. Is this a suitable approach and clear to users?

### 3. Input assumptions and methodologies:

(a) For each sector, are the input assumptions and the methodologies applied to those input assumptions reasonable?

As regards specific sectors:

(b) Are the bioenergy conversion routes used in the model accurate, or are there more efficient routes for converting raw biomass into fuels?

(c) Can the model's assumptions on wave resource be improved, for example regarding the length of wave farms, their distance from shore, the efficiency of devices, constraints from other ocean users, and other assumptions?

(d) Can the model's assumptions on tidal stream resource be improved, for example regarding the method for assessing the resource at specific locations, and the scaling up of individual devices into an array?

(e) Is there any evidence that would help build an understanding of the potential impact of long term spatial development on transport demand, and how could this be accounted for in the model?

(f) Due to uncertainties in the evidence base on energy demand and associated emissions, the model currently sets out only one level of ambition for the future UK share of international shipping. Is there any evidence you could contribute to help build a greater understanding of the potential shipping trajectories?

(g) Could the relative roles of coal and gas out to 2050 vary from the assumptions

shown in this work, and if so, how?

#### **4. Common implications and uncertainties:**

(a) The introduction to the report sets out some of the implications and uncertainties common to the illustrative pathways. Does this list cover the key commonalities? If not, please identify other common implications and uncertainties and provide evidence as to why these are key conclusions from the analysis.

#### **5. Impact of pathways:**

(a) What criteria should be taken into account in understanding the impact and relative attractiveness of pathways?

#### **6. Cost analysis:**

(a) Can you suggest a methodology by which the wider cost implications of choosing one pathway over another could be accurately reflected, and any relevant findings from such an approach?

#### **7. Future improvements to model:**

(a) Do you have any further suggestions for refining the 2050 Pathways Calculator?

(b) Could the 2050 Pathways Calculator be improved to reflect the fact that the level of ambition for some sectors will depend on local preferences? Could the Pathways Calculator be improved such that the inherent degree of individual and local choice in a chosen pathway were clear?